

June 26, 2013

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AWMD/WRAP-KNRP

Mr. Robert E. Aston, PG  
U.S. Environmental Protection Agency  
Region 7, Air and Waste Management Division  
Waste Remediation and Permitting Branch  
11201 Renner Boulevard  
Lenexa, KS 66219

**RE: Annual Site Sampling Report  
Sauer-Danfoss, Inc. - Ames, Iowa**

Dear Mr. Aston:

The following letter report constitutes the Annual Site Sampling Report for Sauer-Danfoss Inc. (Sauer-Danfoss) site in Ames, Iowa. Included is a summary of system operation, remedial system monitoring, and annual reporting for the year 2012.

## SYSTEM OPERATION

Between January 1, 2012 and December 31, 2012, approximately 751,559 gallons were pumped from the collection sump and discharged to the City of Ames, Iowa sanitary sewer. For comparison purposes, approximately 3,552,041 gallons were pumped from the collection sump during 2010, and 2,632,201 gallons were pumped from the collection sump during 2011. The decrease of wastewater pumped from the site is the result of drought conditions experienced in 2012.

## Operational Issues

Remedial system maintenance was conducted on May 8, 2012 and November 15, 2012 by Fehr Graham and Mechanical Comfort, Inc. personnel. Several repairs and adjustments were recommended based on the maintenance events. A summary of the maintenance activities is provided in Attachment 1. Maintenance reports show that the pump was not in operation during the May 2012 inspection nor was the system operating during the October 2012 sampling event.

Typical groundwater recovery distances of approximately 40 to 100 feet downgradient of the trench has been historically observed in the vicinity of piezometers PZ-1 and PZ-2, and of monitoring well MW-19, suggesting constituent migration beyond the trench may be captured during normal system operation, assuming the recovery system is operating and not over-stressed. Analysis of groundwater samples from downgradient monitoring well MW-33 in 2008 and 2010 found levels of tetrachloroethene (TCE) concentrations above quantitation limits and/or the maximum contaminant level (MCL).

RCRA



To verify this result, monitoring well MW-33 was re-sampled in 2009 and 2011. No analytes were detected in either re-sample. However, groundwater samples analyzed from MW-19 during the October 2011 annual sampling event show an increase in PCE and 1,4-dioxane. This occurrence is presumed to be the result of the July 2011 chemical oxidation pilot test considering MW-19 is located downgradient of the pilot test area. This pilot test undoubtedly desorbed from the aquifer solids a significant amount of contaminant mass near the well MW-R13. This increased groundwater flux is expected to have been captured by the groundwater recovery system based on the absence of detections at the wells MW-33 and MW-34.

At MW-12, the groundwater elevation has periodically been measured below the high water level setpoint of the trench and, at times, above. Prior to 2008, analysis of groundwater samples collected from monitoring well MW-12 had shown constituent concentrations below reporting limits. The October 2010 annual sampling event showed PCE concentrations of 225 ug/L in addition to several other VOC analytes that were detected above quantitation limits and/or specific MCLs. October 2011 and 2012 sampling shows results of PCE in concentrations of 7.03 ug/L and 4.61 ug/L, respectively, with other analytes below quantitation limits and MCLs. Water levels in 2010 were high due to high precipitation, but by 2011 and 2012 the levels declined to historical lows. Monitoring well MW-34 was installed downgradient of MW-12 to evaluate off-site migration and was found to have a PCE concentration level of 10.7 ug/L during the October 2011 sampling event. When MW-34 was re-sampled in December 2011 to confirm the PCE impact, the yielded result of <1.0 ug/L indicated a decrease in contaminate level.

## REMEDIAL SYSTEM MONITORING

As required by Sauer-Danfoss facility's Non-Domestic Wastewater Discharge Permit (Permit No. 6593-7) issued by the City of Ames Water and Pollution Control Department (WPCD), samples were collected quarterly from the remedial system discharge and analyzed for select constituents listed in Table 1. Laboratory results are presented in Table 2. Analyzed constituents remained relatively stable across all quarters of 2012. The sampled remedial system discharge remained under the maximum expected concentrations. Copies of the quarterly reports submitted to the City of Ames WPCD are included in Attachment 2.

## ANNUAL SAMPLING AND ADDITIONAL SAMPLING EVENTS

### Groundwater Elevation

Groundwater elevations were measured in on-site monitoring wells during the annual sampling event on October 16-17, 2012. Groundwater elevations for this date are summarized in Table 3 and Figure 1. The water level in the sump was measured at 942.7 feet above Mean Sea Level (MSL). Groundwater elevation contours show groundwater flow toward the collection trench throughout the site (see Figure 1).

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During the October 2012 annual sampling event, the groundwater elevation at both monitoring wells MW-19 and MW-20 were above the sump high water level setpoint of 941.21 feet MSL. Historically, this suggests that impacted groundwater at these monitoring wells was being intercepted by the collection trench, assuming the trench and pump are not overstressed. A review of groundwater samples collected since the October 2008 annual sampling event show increasing constituent concentrations above specific MCLs at these locations. Recent examples can be explained by the chemical oxidation pilot test and resultant desorption from aquifer solids that occurred. Even though contaminant concentrations have increased slightly in recent time, the fact that measured concentrations at the well MW-R13 in 2008, were at their maximum, as of October 2012, overall contaminant mass has been reduced by roughly 35% indicating the chemical oxidation has been effective.

#### Groundwater Volatile Organic Compound (VOC) Constituents

Annual groundwater sampling was conducted on October 16 - 17, 2012, in accordance with the 1996 Sampling and Analysis Plan (SAP) (revised in October 2003, September 2004, and September 2006). Monitoring wells MW-10, MW-11, MW-12, MW-R13, MW-R14R, MW-18, MW-19, MW-R30, MW-31, MW-32, MW-33, and MW-34 were sampled to monitor the performance of the remedial system in providing hydraulic containment of the VOC plume. MW-20 was dry and could not be sampled in October 2012.

The sampling protocol for low-recovery wells detailed in the US Army Corps of Engineers *Revised Standard Operating Procedure for Low-flow Groundwater Purg ing and Sampling*, as incorporated into the SAP, was utilized for monitoring wells exhibiting low groundwater recovery; while the sampling protocol for low-flow sampling specified in the SAP was utilized for the remainder of the selected monitoring wells. The bladder pump intake was positioned at the midpoint of the well screen. Groundwater was directed from the pump discharge tubing into a flow-through cell to track water quality parameters of pH, specific conductance, turbidity, dissolved oxygen (DO), and temperature. Groundwater samples were collected following stabilization of all water quality parameters. Groundwater sampling and final water quality stabilization data is presented in Table 4. Following purging, the pump tubing was disconnected from the flow-through cell, and groundwater samples were collected.

Groundwater samples were analyzed for the constituents listed in Table 1. Results are shown in Table 5, as well as in Figure 2. Laboratory analytical results are provided in Attachment 3. Table 5 compares the 2012 analytical results with respective historical concentrations obtained during the following sampling events:

- September/October 1994 (Harding Lawson Associates, June 1995 Report)
- November 21, 1997 (Montgomery Watson, February 23, 1998, Annual Sampling Report)
- October 20, 1998 (Montgomery Watson, March 1, 1999, Annual Site Sampling Report)
- October 20, 1999 (Montgomery Watson, February 28, 2000, Annual Site Sampling Report)

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- November 9, 2000 (Montgomery Watson, March 21, 2001, Annual Site Sampling Report)
- November 6, 2001 (MWH, April 8, 2002, Annual Site Sampling Report)
- October 22, 2002 (MWH, May 5, 2003, Annual Site Sampling Report)
- November 17-19, 2003 (MWH, September 27, 2004, Annual Site Sampling Report)
- November 8-19, 2004 (MWH, May 25, 2005, Annual Site Sampling Report)
- November 14-16, 2005 (MWH, June 28, 2006, Annual Site Sampling Report)
- November 13-17, 2006 (MWH, April 26, 2007, Annual Site Sampling Report)
- October 8-10, 2007 (MWH, July 31, 2008, Annual Site Sampling Report)
- October 27-31, 2008 (Fehr Graham, March 26, 2009, Annual Site Sampling Report)
- October 15, 2009 (Fehr Graham, April 5, 2010, Annual Site Sampling Report)
- April 19, 2010 (Fehr Graham, based on January 26, 2010 USEPA conference call).
- October 20, 2010 (Fehr Graham, May 9, 2011, Annual Site Sampling Report)
- March 31, 2011 (Fehr Graham, May 9, 2011, Annual Site Sampling Report)
- October 18-19, 2011 (Fehr Graham, August 9, 2012, Revised Annual Site Sampling Report)

A comparative summary of samples collected via low-flow sampling during the annual October 2012 sampling event is provided below:

- **MW-10:** Constituent concentrations in monitoring well MW-10 were generally less than or similar to those observed in prior years. Concentrations of 1,1-dichloroethene (1,1-DCE); 1,4-dioxane; PCE; 1,1,1-trichloroethane (1,1,1-TCA); and trichloroethene (TCE) remained above their respective MCL/Preliminary Remediation Goal (PRG).
- **MW-11:** Constituent concentrations in monitoring well MW-11 were generally slightly greater than or similar to those observed in prior years. Concentrations of 1,1-dichloroethene (1,1-DCE); 1,4-dioxane; PCE; 1,1,1-TCA; and TCE remained above their respective MCL/PRG.
- **MW-12:** Only PCE was detected except its reported concentration of 4.61 ug/L is below its MCL.
- **MW-R13:** Constituent concentrations in monitoring well MW-R13 are generally lower than those observed in 2008, 2010 and 2011. Concentrations of 1,1-DCA; 1,4-dioxane; PCE; 1,1,1-TCA; and 1,1,2-TCA remain above the respective MCL/PRG.

- MW-R14R: MW-R14R was sampled to assist in the performance evaluation of the chemical oxidation pilot test. No constituents were detected exceeding a respective MCL/PRG.
- MW-18: Constituent concentrations in monitoring well MW-18 were all below laboratory quantitation limits.
- MW-19: Constituent concentrations in monitoring well MW-19 were lower than those observed in October 2010, but slightly higher than 2011. Concentrations of 1,1-DCE, 1,4-dioxane, PCE, and TCE are above the respective MCL/PRGs. Concentrations of 1,1-DCA; cis-1,2-dichloroethene (cis-1,2-DCE); and 1,1,1-TCA were detected but remained below their respective MCL/PRG.
- MW-R30: Constituent concentrations in monitoring well MW-R30 are below laboratory quantitation limits, with the exception of PCE and TCE. An increase above the MCL was observed in PCE and TCE concentrations as compared to October 2011 when only cis-1,2-DCE was found to exceed an MCL/PRG.
- MW-31: Constituent concentrations in monitoring well MW-31 are below laboratory quantitation limits.
- MW-32: Constituent concentrations in monitoring well MW-32 have remained below laboratory quantitation limits.
- MW-33: All constituents were found to be below laboratory quantitation limits. In October 2010, PCE exceeded its MCL/PRG.
- MW-34: Constituent concentrations in monitoring well MW-34 have remained below laboratory quantitation limits with the exception of PCE detected in 2011.

Shallow groundwater isoconcentration contour maps and hydrogeologic profiles for VOCs historically and/or currently exceeding MCLs/PRGs are provided in Figures 3 through 28. These VOCs include: 1,1-DCA; 1,2-dichloroethane (1,2-DCA); 1,1-DCE; cis-1,2-DCE; trans-1,2-dichloroethene (trans-1,2-DCE); 1,4-dioxane; methylene chloride; PCE; 1,1,1-TCA; 1,1,2-trichloroethane (1,1,2-TCA); TCE; vinyl chloride; and total xylenes.

Graphs of historical 1,1-DCA; 1,1-DCE; cis-1,2-DCE; 1,4-dioxane; methylene chloride; PCE; 1,1,1-TCA; 1,1,2-TCA; TCE; and vinyl chloride concentrations in monitoring wells historically showing detections above laboratory quantitation limits are provided in Figures 29 through 38. Concentrations of analyzed constituents appear to be remaining generally steady. A decreasing trend is observed for most constituents with the exclusion of mixed results of growth and decline of PCE; 1,1,1-TCA and TCE concentrations.

### Data Validation

All samples were analyzed for both the constituents specified in the Construction Work Plan and 1,4-dioxane within the EPA Method SW-8260B maximum holding time of 14 days and at the required temperature of 4 degrees Celsius +/- 2.

Samples collected during the annual sampling event on October 16-17, 2012, were hand delivered by Fehr Graham to the laboratory on October 17, 2012 within two (2) hours of the final collection of the October 17<sup>th</sup> samples. Samples were received at the laboratory at a temperature of 5.9 degrees Celsius on ice. It should be noted that the groundwater temperature was between approximately 10 and 15 degrees Celsius during the sampling. Analysis of all trip and equipment blanks indicated constituent concentrations were below laboratory quantitation limits. A duplicate sample was collected from monitoring well MW-33 and submitted to the laboratory labeled as D01. The RPDs between the MW-33 sample and its duplicate was within 15 percent for all constituents. Calculated RPDs for the annual sampling event are summarized in Table 6. Surrogate compound recovery was outside the control limits during 1,4-Dioxane analysis for MW-R13, MW-10, and MW-R14R. As evidence of matrix interference was present, re-analysis was not performed. The 1,4-Dioxane sample for MW-R13 was diluted due to the abundance of non-target analytes resulting in an elevated reporting limit. MS / MSD recovery was within the acceptable range for all sample batches evaluated. The RPDs between MS and MSD samples were within the acceptable levels. The lab control sample (LCS) / lab control sample duplicate (LCSD) recovery were within the acceptable range. The laboratory blank's calibration verification recovery was also within the method control limit for all analytes.

### NEXT STEPS AND CAPPs

The current remedial system, the collection trench, has operated approximately fifteen (15) years without a significant reduction in contaminant concentrations. Besides on-site remediation, an additional goal of the collection trench was to intercept off-site contaminant migration. However since 2008, increased contaminant levels have been observed in the area of downgradient monitoring wells MW-12, MW-18, MW-19, and MW-33. A Corrective Action Plan Pilot Study (CAPPs) was submitted to the U.S. EPA Region 7 and approved on June 22, 2011. This document discusses an aggressive approach to remediate the source area in the region of monitoring well MW-R13. The CAPPs proposed conducting two (2) in-situ chemical oxidation (ISCO) events using Klorzur® activated sodium persulfate by FMC Corporation. The events took place in July 2011 and January of 2012. In total, approximately 18,900 pounds of persulfate, 25,800 pounds of sodium hydroxide activator in addition to potable water was successfully injected over an approximate 2,500 square foot area. To analyze the effectiveness of the injection event, groundwater samples were collected from monitoring wells MW-R13, MW-10, and MW-R14R in September, October, and December 2011, then again in April, June, and October 2012. To investigate the possibility of an upgradient source from the treatment area, a mobile lab capable of analyzing soil and groundwater samples is proposed. Details of this activity have been provided in a separate submittal.

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In the meantime, as required by Permit No. 6593-7, quarterly system sampling will continue, and samples will continue to be analyzed for the select constituents listed in Table 1. As necessary, the sixteenth (16<sup>th</sup>) annual sampling event will be conducted during the fourth (4<sup>th</sup>) quarter of 2013. Groundwater elevations will be measured in all monitoring wells during the scheduled sampling event. Samples will be collected from monitoring wells MW-10, MW-12, MW-R13, MW-R14R, MW-18, MW-19, MW-20, MW-R30, MW-31, MW-33, and MW-34 and analyzed for constituents listed in Table 1. The Annual Site Sampling Report will be prepared and submitted to the US EPA on or about March 2013.

If you have questions regarding this report, please do not hesitate to call Joel Zirkle at (815) 394-4700.

Best regards,



Erica K. Toledo  
Hydrogeologist



Joel P. Zirkle, P.G.  
Principal/Branch Manager

EKT/JPZ:cld

cc: Mr. Ken Foltz, Sauer-Danfoss, Inc. - Freeport, IL (w/electronic Enc.)  
Mr. Gary Erickson, Sauer-Danfoss, Inc. - Ames, IA (w/electronic Enc.)  
Mr. Jim Withers, Sauer-Danfoss, Inc. - Ames, IA (w/electronic Enc.)

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TABLE 1  
ANALYTE LIST

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Acetone\*  
1,1-Dichloroethane\*  
1,2-Dichloroethane  
1,1-Dichloroethene\*  
cis-1,2-Dichloroethene\*  
trans-1,2-Dichloroethene  
1,4 Dioxane\*\*  
Methylene Chloride  
Tetrachloroethene\*  
1,1,1-Trichloroethane\*  
1,1,2-Trichloroethane  
Trichloroethene\*  
Vinyl Chloride\*\*\*  
Total Xylenes\*

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\* Required by Sauer-Danfoss' Permit No. 6593-3.

\*\* Required for select monitoring wells.

\*\*\* Beginning second quarter 2002, as requested in the United States Environmental Protection Agency (US EPA) comments on the 2002 Annual Site Sampling Report.

TABLE 2  
SAMPLING RESULTS OF REMEDIAL SYSTEM DISCHARGE

Date	Acetone (mg/L)	1,1-DCA (mg/L)	1,1-DCE (mg/L)	cis-1,2-DCE (mg/L)	PCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	Xylenes (mg/L)
Maximum <sup>a</sup>	44	370	170	490	1700	650	110	11
2/22/2012	<10.0	4.48	5.21	29.7	260	23.9	11	<3.0
5/9/2012	<10.0	5	5.42	31	227	19.5	9.57	<3.0
8/15/2012	<10.0	6.99	7.86	51.6	369	34.7	16.2	<3.0
11/15/2012	<10.0	7.47	11	64.8	499	23.7	24.8	<3.0

<sup>a</sup> Maximum expected concentrations as provided to the City of Ames Water and Pollution Control Department (WPCD) on July 31, 1996.

mg/L	= Micrograms per liter.
1,1-DCA	= 1,1-Dichloroethane.
1,1-DCE	= 1,1-Dichloroethene.
cis-1,2-DCE	= cis-1,2-Dichloroethene.
PCE	= Tetrachloroethene.
1,1,1-TCA	= 1,1,1-Trichloroethane.
TCE	= Trichloroethene.
NA	= Not applicable.

TABLE 3  
GROUNDWATER ELEVATIONS - Annual Sampling Event

Well No.	Top of Casing NGVD	Total Depth Elevation (ft)	Top of Screen NGVD	Elevation to 02-06-		GW Elevation		GW Elevation		GW Elevation		GW Elevation		GW Elevation		GW Elevation		GW Elevation		GW Elevation	
				11/21/1997	11/21/1997	10/20/1998	10/20/1999	11/9/2000	11/6/2001	10/22/2002	11/17/2003	11/9/2004	11/14/2005	11/13/2006	10/8/2007	10/27/2008	10/15/2009	10/20/2010	10/19/2011	10/16/2012	
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
<u>Shallow Wells</u>																					
1	973.71	941.20	951.20	967.40	966.69	967.08	966.30	967.26	967.12	967.36	967.10	967.29	a	a	a	a	a	a	a	a	a
R2S	970.49	949.30	959.30	961.94	962.28	962.79	961.46	963.23	962.05	961.86	962.69	962.31	961.09	962.21	962.34	962.94	962.41	962.05	961.86	d	
3	969.05	953.90	961.90	963.28	964.01	964.13	962.45	963.88	963.57	963.17	964.15	963.64	a	a	a	a	a	a	a	a	a
4	970.39	953.10	964.10	965.11	965.10	965.18	963.98	965.06	965.01	964.67	965.15	964.89	a	a	a	a	a	a	a	a	a
5	965.82	950.40	960.40	958.03	957.18	957.53	956.19	957.37	957.68	957.07	957.99	957.81	955.99	958.51	958.66	958.30	957.44	958.52	955	955.62	
R6S	965.39	946.00	956.00	957.46	956.47	956.97	955.61	956.61	956.85	956.28	956.94	957.26	955.33	957.92	958.30	957.70	956.85	957.89	955.17	954.63	
10	964.22	945.70	948.70	955.10	954.36	954.38	953.85	954.23	954.93	954.47	954.46	954.70	953.69	955.57	954.93	955.12	954.12	955.47	953.11	951.99	
11	963.26	942.60	945.60	958.06	951.42	951.12	950.89	950.64	951.76	951.62	951.21	951.28	950.86	952.29	951.56	951.67	950.9	952.6	950.42	947.02	
12	959.70	936.80	939.80	948.96	938.23	942.24	939.42	938.82	939.56	940.91	940.11	940.51	938.78	939.94	939.19	939.88	938.05	944.11	938.52	939.07	
R13	965.67	941.70	951.70	956.85	956.04	955.89	954.17	955.46	957.14	956.40	956.31	956.37	954.58	957.79	957.22	957.68	955.94	957.67	954.52	953.71	
R14 <sup>k</sup>	965.83	946.10	956.10	954.86	953.04	953.38	953.31	952.07	954.69	954.43	953.07	953.35	952.52	954.93	954.18	955.06	953.28	955.75	952.43	k	
15	957.99	935.20	938.20	951.98	949.09	949.27	948.22	947.29	950.76	950.62	950.06	949.90	948.77	951.29	950.46	951.52	949.78	951.92	949.07	947.4	
16	965.90	943.33	b	954.98	951.80	952.41	952.65	950.17	954.51	954.16	954.39	953.03	951.09	954.51	954.14	955.40	952.96	955.72	951.3	950.98	
18	956.73	938.80	941.80	950.34	948.66	948.78	948.28	942.43	948.61	948.82	949.60	949.30	948.03	949.66	949.30	950.67	939.61	948.71	948.09	947.16	
19	954.31	936.60	939.60	947.67	944.63	945.43	944.55	943.15	945.04	945.31	944.91	945.54	945.27	945.55	945.80	946.32	945.58	945.59	944.81	940.66	
20	956.66	939.40	942.40	950.36	945.88	946.48	944.90	942.83	946.08	947.14	946.42	946.33	945.50	947.54	946.56	947.23	945.88	947.44	945.43	940.79	
28	957.17	938.70	941.70	952.54	952.37	952.46	952.21	952.63	952.48	952.30	952.51	952.44	952.18	952.94	952.90	952.06	951.69	952.15	950.13	950.48	
29 <sup>k</sup>	955.57	941.40	944.40	950.69	949.87	949.95	949.39	950.23	949.90	949.83	950.11	949.71	949.46	950.63	h	h	h	h	h	k	
31	953.60	936.50	946.50	947.81	946.97	946.99	947.01	947.43	947.37	947.24	946.97	946.85	946.84	946.99	947.12	946.81	946.85	947	945.8	945.1	
PZ-1	953.81	927.30	b	948.99	945.59	945.84	944.51	946.08	945.67	945.84	946.41	946.20	946.15	946.93	946.61	946.26	942.95	945.58	941.61	940.15	
PZ-2 <sup>k</sup>	951.42	925.86	b	947.96	941.42	942.26	940.06	939.27	941.67	942.36	941.89	942.42	941.38	943.61	941.63	943.35	d	939.76	k		
33	951.67	929.24	939.24	c	c	c	c	c	c	c	c	c	943.95	946.52	947.28	947.55	945.97	946.14	943.59	943.57	
34	951.85	935.25	940.25	j	j	j	j	j	j	j	j	j	j	j	j	j	943.33	942.45	942.4		

TABLE 3

				Elevation	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
	Top of Casing	Total Depth	Top of Screen	2/4/1997	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation
	NGVD	NGVD	NGVD	to 02-06-	11/21/1997	10/20/1998	10/20/1999	11/9/2000	11/6/2001	10/22/2002	11/17/2003	11/9/2004	11/14/2005	11/13/2006	10/8/2007	10/27/2008	10/15/2009	10/20/2010	10/19/2011	10/16/2012	GW Elevation
Well No.	Elevation (ft)	Elevation (ft)	Elevation (ft)	97 (ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
<b>Deep Wells</b>																					
R2D	970.41	928.30	933.30	960.53	961.84	961.73	961.03	961.55	961.47	961.50	961.89	961.62	960.72	961.69	961.56	962.21	961.77	961.58	961.12	d	
R17	965.77	875.60	880.60	944.25	942.79	943.57	943.79	942.17	943.08	943.30	d	942.55	942.26	942.19	943.22	943.14	943.12	943.68	943.1	d	
R30	958.21	902.40	907.40	950.15	947.05	947.73	947.35	947.52	947.71	948.03	947.80	947.78	947.60	948.40	948.04	947.63	945.46	947.18	944.9	943.58	
32	954.16	897.70	907.70	944.09	942.90	943.08	940.04	943.25	943.23	943.31	943.38	943.19	943.18	943.62	943.49	943.37	941.51	942.42	941.43	939.14	
Sump and Collection Trench	NA	NA	NA	NA	938.71 <sup>e</sup>	941.23	940.49	939.14	940.73	942.06	939.44	939.05	939.13 <sup>f</sup>	939.20 <sup>g</sup>	939.4	938.92 <sup>i</sup>	937.47	940.43	940.75	942.70	

## Notes:

- a Monitoring well abandoned October 27, 2005.
  - b Unknown.
  - c Monitoring well installed October 27, 2005.
  - d Monitoring well inadvertently overlooked during sampling event.
  - e Estimated.
  - f Water level measured December 13, 2005.
  - g Water level measured November 17, 2006.
  - h Inaccessible; monitoring well collapsed.
  - i Water level measured October 28, 2008
  - j Monitoring well installed September 2, 2010
  - k Monitoring well abandoned December 2011

NGVD = National Geodetic Vertical Datum.  
GW = Groundwater.  
NA = Not applicable/available.  
ft = Feet.

TABLE 4  
GROUNDWATER SAMPLING FINAL STABILIZATION DATA - October Annual Sampling Event

Monitoring Well	Time Sampled	Depth to Water (ft) <sup>a</sup>	pH <sup>b</sup>	Specific Conductance <sup>c</sup> (mS/cm)	Temperature <sup>d</sup> (°C)	DO (mg/L) <sup>e</sup>	Turbidity (NTU) <sup>f</sup>
MW-10	14:32 10/16/12	12.23	7.35	1.60	18.81	0.68	0.22
MW-11	12:50 10/17/12	16.24	7.09	1.33	15.08	0.70	13.47
MW-12	17:35 10/16/12	20.63	7.30	0.75	18.71	1.03	12.21
MW-R13	13:55 10/16/12	11.96	6.96	22.20	17.14	4.94	48.60
MW-R14R	15:22 10/16/12	9.58	7.03	1.43	19.95	2.12	382.00
MW-18	11:52 10/17/12	9.57	7.31	1.19	13.89	0.85	2.77
MW-19	18:39 10/16/12	13.65	7.52	0.91	13.93	1.33	253.00
MW-20	No volume 10/17/12	15.87	7.19	1.190	14.54	1.11	27.60
MW-R30	18:07 10/16/12	14.63	7.38	0.746	15.99	2.56	14.94
MW-31	11:15 10/17/12	8.50	6.99	1.800	14.77	0.72	152.00
MW-32	10:50 10/17/12	15.02	7.37	0.698	12.93	0.94	38.80
MW-33	12:05 10/17/12	8.10	7.19	1.004	15.01	0.49	337.00
MW-34	16:43 10/16/12	9.45	7.09	1.147	16.45	0.71	125.00

Notes:

<sup>a</sup> Before sampling

<sup>b</sup> Stabilization criteria: stabilized within +/- 0.1 pH units

<sup>c</sup> Stabilization criteria: stabilized within +/-

<sup>d</sup> Stabilization criteria: stabilized within +/- 10%

<sup>e</sup> Stabilization criteria: stabilized within +/- 0.3 mg/L

<sup>f</sup> Stabilization criteria: stabilized within +/- 10 NTUs

ft = Feet.

mS/cm = Millisiemens per centimeter.

°C = Degrees Celsius.

DO = Dissolved oxygen.

NTU = Nephelometric Turbidity Unit.

NM = Not measured.

TABLE 5

## GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes
MCL <sup>a</sup>		5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	5	200	5	5	2	10
MW-5	7/17/2011	<10.0	2.13	<1.00	<2.0	<1.00	<1.00	<6.0	<5.0	<1.0	1.81	<1.0	1.33	<1.0 <sup>g</sup>	<3.0
MW-R65	7/17/2011	<10.0	1.83	<1.00	<2.0	95.3	<1.00	<6.0	<5.0	209	1.96	<1.0	16.6	<1.0	<3.0
MW-10	Sep-Oct 1994 <sup>e</sup>	<25	9.6 <sup>d</sup>	<5.0	54	110	<5.0	-	<5.0	1,800	410	<5.0	28	-	<5.0
	11/21/1997	<20	16.4	<1.0	35.7	135	1.6	-	<10	766	162	<1.0	54.5	-	<3.0
	10/20/1999	<20	11.3	<1.0	28.5	87.7	<1.0	-	<10	456	118	<1.0	40.4	-	<3.0
	11/6/2001	<20	10.5	<1.0	22	104	<1.0	-	<5.0	424	120	<1.0	53.2	-	<3.0
	10/22/2002	<20	11.6	<1.0	23.7	61.1	1.7	-	<5.0	497	174	<1.0	59.8	<1.0	<3.0
	11/10/2004	<20.0	14.7	<1.00	37.6	49.6	<1.00	12.4	<5.00	625	223	<1.00	42.9	<1.00	<3.00
	11/15/2006	<10.0	10	<1.00	25.3	53.3	1.07	11	<5.00	385	90.1	<1.00	32.3	<1.00	<3.00
	11-15-06 <sup>e</sup>	<10.0	10.8	<1.00	23.9	49.7	1	14 <sup>f</sup>	<5.00	372	89.7	<1.00	31.7	<1.00	<3.00
	10/30/2008 (LF)	<10.0	13.6	<1.00	35.6	32.6	<1.00	12	<5.00	405	188	<1.00	30.9	<1.00	<3.00
	10-30-08 <sup>e</sup> (LF)	<10.0 <sup>r</sup>	14	<1.00	35.7	35.1	<1.00	15	<5.00	421	194	<1.00	31.5	<1.00	<3.00
	10/20/2010	<10.0	18.7	<1.00	56.7	25.2	<1.00	21	<5.00	504	307	<1.00	30.7	<1.00	<6.00
	10/18/2011	<50.0 <sup>v</sup>	16.9	<5.00	45.2	20	<5.00	14	<25.0 <sup>g</sup>	580	294	<5.00	18.4	<5.00 <sup>g</sup>	<15.0 <sup>g</sup>
	12/13/2011	<50.0 <sup>r</sup>	11.4	<5.00	39	17	<5.00	12	<25.0	465	246	<5.00	20	<5.00 <sup>v</sup>	<15.0
	10/16/2012	<50.0	12.3	<5.00	26.7	29.2	<5.00	9.6	<25.0	352	192	<5.00	27.4	<5.00	<15.0
MW-11	Sep-Oct 1994 <sup>e</sup>	<25	44	<5.0	130	730	7.1 <sup>d</sup>	-	<5.0	2,500	810	8	91	-	<5.0
	11/21/1997	<200 <sup>g</sup>	33.9	<10 <sup>g</sup>	57.6	676	<10 <sup>g</sup>	-	<100 <sup>g</sup>	1,460	280	1.8	61.9	-	<30 <sup>g</sup>
	10/20/1999	<20	20.2	<1.0	25.3	384	2	-	<10	610	121	<1.0	44.8	-	<3.0
	11/6/2001	<20	14.4	<1.0	18	227	1.7	-	<5.0	811	88.1	<1.0	46.8	-	<3.0
	11-06-01 <sup>e</sup>	<20	15.1	<1.0	18.2	233	1.8	-	<5.0	585	87.8	<1.0	44.9	-	<3.0
	10/22/2002	<20	16.5	<1.0	15.6	176	1.4	-	<5.0	551	90.6	<1.0	43.6	<1.0	<3.0
	11/10/2004	<20	12.8	<1.00	15.4	88.9	1.92	10.4	<5.00	420	134	<1.00	34	<1.00	<3.00
	11/15/2006	<10.0	14.8	<1.00	23.3	75.7	1.78	12	<5.00	422	165	<1.00	32.6	<1.00	<3.00
	11-15-06 <sup>e</sup>	<10.0	15.5	<1.00	26.3	79.6	1.73	h	<5.00	426	172	<1.00	35	<1.00	<3.00
	10/30/2008 (LF)	<50	6.45	<5.00	10.1	35.2	<5.00	5.2	<25.0 <sup>g</sup>	355	90.6	<5.00	18.4	<5.00 <sup>g</sup>	<15.0 <sup>g</sup>
	10-30-08 <sup>e</sup> (LF)	<10.0 <sup>r</sup>	8.32	<1.00	14.1	37.5	<1.00	h	<5.00	391	131	<1.00	21.5	<1.00	<3.00
	10/20/2010	<10.0	6.67	<1.00	16.8	31.2	<1.00	5.8	<5.00	469 <sup>v</sup>	106	<1.00	19.8	<1.00	<6.0
	10/17/2012	<10.0	13.3	<1.00	33.3	28.5	<1.00	9.8	<5.00	477	244	<1.00	24.7	<1.00	<3.0

TABLE 5

## GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes
		5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	5	200	5	5	2	10
MW-12	Sep-Oct 1994 <sup>c</sup>	<25	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0
	11/21/1997	<10	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/20/1998	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/20/1999	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	11/9/2000	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	-	<3.0
	11/6/2001	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/22/2002	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	11/18/2003	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/9/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/16/2005	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/15/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/9/2007	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/27/2008 (PD)	<10.0	<1.00	<1.00	<2.00	<1.00 <sup>a</sup>	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/27/2008 (RP)	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-
	10/27/2008 (LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	12.9	<1.00	<1.00	<1.00	<1.00	<3.00
	10/15/2009	u	u	u	u	u	u	u	u	u	u	u	u	u	u
	4/19/2010	<10.0 <sup>v</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	13	<5.00	<1.00	<1.00	<2.00	<3.00
	10/20/2010	<10.0	2.46	<1.00	19.4	<1.00	<1.00	<2.0	<5.00	225 <sup>v</sup>	20.4	<1.00	1.17	<1.00	<6.00
	10/19/2011	<10.0 <sup>v</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	7.03	<1.00	<1.00	<1.00	<1.00	<3.00
	10/16/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<1.0	<5.00	4.61	<1.00	<1.00	<1.00	<1.00	<3.00
MW-R13	Sep-Oct 1994 <sup>c</sup>	<25	560	5.8	250	200	<5.0	-	9.1 <sup>d</sup>	1,100	970	30	72	-	<5.0
	11/21/1997	<400 <sup>g</sup>	1,980	<20 <sup>g</sup>	1,120	81.2	<20 <sup>g</sup>	-	<200 <sup>g</sup>	1,200	3,140	159	<20	-	<60 <sup>g</sup>
	10-20-99 <sup>l</sup>	<400	2,530	<20	1,510	57.5	<20	-	<200	1,750	3,370	195	<20	-	<60
	11/6/2001	<20	2,020	6.5	1,510	78.8	1.6	-	39	3,040	3,220	238	24.3	-	<3.0
	10/22/2002	<20	3,680	10.3	1,430	71.2	<1.0	-	24.3	3,170	2,140	188	27.4	40.6	<3.0
	11/10/2004	<20.0	1,940	5.84	2,610	101	2.4	124	29.9	4,830	4,790	270	50.6	<1.00	<3.00
	11/14/2006	<231 <sup>g</sup>	2,480	<8.00 <sup>g</sup>	4,650	53	<7.50 <sup>g</sup>	74.6	196 <sup>d</sup>	8,080	6,660	310	40.5 <sup>d</sup>	106	<8.50 <sup>g</sup>
	10/30/2008 (PD)	<1000 <sup>g</sup>	2,740	<100 <sup>g</sup>	5,890	<100 <sup>g</sup>	<100	-	<500 <sup>g</sup>	8,580	7,970	337	<100 <sup>g</sup>	<100 <sup>g</sup>	<300 <sup>g</sup>
	10-30-08 <sup>g</sup> (PD)	<1000 <sup>g,f</sup>	2,700	<100 <sup>g</sup>	5,800	<100 <sup>g</sup>	<100	-	<500 <sup>g</sup>	8,020	8,060	346	<100 <sup>g</sup>	<100 <sup>g</sup>	<300 <sup>g</sup>
	10/30/2008 (RP)	-	-	-	-	-	-	78	-	-	-	-	-	-	-
	10-30-08 <sup>g</sup> (RP)	-	-	-	-	-	-	77	-	-	-	-	-	-	-
	10/31/2008 (LF)	<1000 <sup>g</sup>	1,920	<100 <sup>g</sup>	3,460	<100 <sup>g</sup>	<100	110	<500 <sup>g</sup>	5,480	4,720	221	<100 <sup>g</sup>	<100 <sup>g</sup>	<300 <sup>g</sup>
	10/20/2010	<10.0	2860 <sup>g</sup>	<1.0	5110 <sup>g</sup>	40.5	2.37	92	30.5	10300 <sup>v</sup>	6,240	325	45.8	66.4	<6.0
	10/18/2011	<500.0 <sup>v</sup>	2,140	<50.0 <sup>g</sup>	328	<50.0 <sup>g</sup>	<50.0	<120 <sup>g</sup>	<250 <sup>g</sup>	5,990	4,000	144	<50.0 <sup>g</sup>	<50.0 <sup>g</sup>	<150.0 <sup>g</sup>
	12/12/2011	<1000 <sup>g,f</sup>	251	<100 <sup>g</sup>	250	<100 <sup>g</sup>	<100	<60 <sup>g</sup>	<500 <sup>g</sup>	3,150	1,050	<100 <sup>g</sup>	<100 <sup>g,v</sup>	<100 <sup>g</sup>	<300 <sup>g</sup>
	10/16/2012	<250 <sup>g</sup>	1,560	<25 <sup>g</sup>	<50.0 <sup>g</sup>	<25 <sup>g</sup>	<25 <sup>g</sup>	39 <sup>g,j</sup>	<125 <sup>g</sup>	3,270	2,290	102	<25 <sup>g</sup>	<25 <sup>g</sup>	<75 <sup>g</sup>
MW-R14 <sup>w</sup>	10/18/2011	<10.0 <sup>v</sup>	11.9	<1.00	20.9	<1.00	<1.00	<6.0	<5.00	234	86.8	<1.00	1.24	<1.00	<3.00

TABLE 5

## GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes
		5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	5	200	5	5	2	10
MW-R14R	12/13/2011	<10.0 <sup>f</sup>	5.29	<1.00	9.66	<1.00	<1.00	<6.0	<5.00	3.67	30	<1.00	<1.00	<1.00 <sup>v</sup>	<3.00
	12-13-2011 <sup>e</sup>	<10.0 <sup>f</sup>	4.97	<1.00	9.91	<1.00	<1.00	<6.0	<5.00	3.83	30.5	<1.00	<1.00	<1.00 <sup>v</sup>	<3.00
	10/16/2012	<10.0	3.27	<1.00	6.36	<1.00	<1.00	2	<5.00	3.23	25.1	<1.00	<1.00	<1.00	<3.00
MW-15	10/22/2002	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	2.1	<1.0	<1.0	<1.0	<1.0	<3.0
MW-16	10/22/2002	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
MW-18	Sep-Oct 1994 <sup>c</sup>	<25 <sup>j</sup>	<5.0 <sup>j</sup>	<5.0 <sup>j</sup>	<5.0 <sup>j</sup>	<5.0 <sup>j</sup>	<5.0 <sup>j</sup>	-	<5.0 <sup>j</sup>	<5.0	<5.0 <sup>j</sup>	<5.0	<5.0	-	7.7
	11/21/1997	<10	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/20/1998	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/20/1999	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	11/9/2000	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	-	<3.0
	11/6/2001	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/22/2002	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	11/18/2003	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/9/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/15/2005	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/15/2006	<10.0 <sup>k</sup>	<1.00 <sup>k</sup>	<1.00 <sup>k</sup>	<2.00 <sup>k</sup>	<1.00 <sup>k</sup>	<1.00 <sup>k</sup>	<2.0 <sup>k</sup>	<22.0 <sup>k</sup>	<1.00 <sup>k</sup>	<3.00 <sup>k</sup>				
	10/9/2007	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/29/2008(LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/15/2009	u	u	u	u	u	u	u	u	u	u	u	u	u	u
	10/20/2010	<10.0	3.54	<1.00	29.7	<1.00	<1.00	<2.0	<5.00	309	38	<1.00	1.47	<1.00	<3.00
	3/31/2011	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/19/2011	<10.0 <sup>v</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/17/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<1.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00

TABLE 5  
GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes
		MCL <sup>a</sup>	5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	200	5	5	2	10
MW-19	Sep-Oct 1994 <sup>c</sup>	<25	130	<5.0	140	150	<5.0	-	<5.0	1,600 <sup>d</sup>	900	18	170	-	<5.0
	11/21/1997	<20	77.8	<1.0	13.9	78.1	3.5	-	<10	180	96	5.6	49.4	-	<3.0
	11-21-97 <sup>e</sup>	<20	80.2	<1.0	20.3	79.3	4.1	-	<10	190	120	5.3	52.5	-	<3.0
	10/20/1998	<20	57.2	<1.0	24.5	88.3	2.2	-	<10	206	163	6.6	55.2	-	<3.0
	10/20/1999	<20	58.8	<1.0	43.4	106	2.1	-	<10	374	220	7.1	73.4	-	<3.0
	11/9/2000	<20	35.6	<1.0	10	17.9	<1.0	-	<5.0	213	30.6	<1.0	21.9	-	<3.0
	11/6/2001	<20	9.6	<1.0	7.9	13.2	<1.0	-	<5.0	187	45.4	1	14.8	-	<3.0
	10/22/2002	<20	5.1	<1.0	5	8.9	<1.0	-	<5.0	130	38.9	<1.0	11.2	<1.0	<3.0
	11/18/2003	<20.0	11.7	<1.00	21.9	19.7	<1.00	14.6	<5.00	235	101	1.28	24.3	<1.00	<3.00
	11/9/2004	<20.0	2.8	<1.00	5.77	4.72	<1.00	9.4	<5.00	129	26.3	<1.00	9.23	<1.00	<3.00
	11-09-04 <sup>e</sup>	<20.0	2.7	<1.00	5.41	4.77	<1.00	9.8	<5.00	122	26.2	<1.00	9.75	<1.00	<3.00
	11/16/2005	<20.0	2.15	<1.00	3.45	3.19	<1.00	<6	<5.00	76.4	15.4	<1.00	4.76	<1.00	<3.00
	11-16-05 <sup>e</sup>	<20.0	2.33	<1.00	3.69	3.24	<1.00	<6	<5.00	73.4	15.3	<1.00	4.76	<1.00	<3.00
	11/17/2006	<10.0	5.97	<1.00	9.85	7.41	<1.00	17	<5.00	124	32.7	<1.00	8.75	<1.00	<3.00
	10/10/2007	<10.0	<1.00	<1.00	6.31	1.98	<1.00	5	<5.00	64.5	2.66	<1.00	3.52	<1.00	<3.00
	10/10/2007	<10.0	<1.00	<1.00	6.49	1.75	<1.00	5.1	<5.00	67.2	2.46	<1.00	3.37	<1.00	<3.00
	10/29/2008(LF)	<10.0	1.12	<1.00	2.05	1.27	<1.00	<2.0	<5.00	40	7.66	<1.00	1.9	<1.00	<3.00
	10/15/2009	<10.0	1.6	<1.00	<2.00	3.41	<1.00	3.5	<5.00	38	6.83	<1.00	3.64	<1.00	<4.00
	10-15-09 <sup>e</sup>	<10.0	1.56	<1.00	2.2	3.72	<1.00	3.1	<5.00	38.2	6.71	<1.00	4.06	<1.00	<4.00
	10/20/2010	<10.0	25.2	<1.00	44	13.6	<1.00	22	<5.00	432 <sup>y</sup>	64.9	1.02	14.4	<1.00	<6.00
	10-20-2010 <sup>e</sup>	<10.0	22.2	<1.00	40.3	11.1	<1.00	27	<5.00	399 <sup>y</sup>	59.5	<1.00	12.4	<1.00	<6.00
	3/31/2011	<10.0	4.94	<1.00	6.21	4.67	<1.00	12	<5.00	69.7	18	<1.00	5.18	<1.00	<3.00
	10/19/2011	<10.0 <sup>v</sup>	3.84	<1.00	4.19	3.09	<1.00	<12 <sup>x</sup>	<5.00	50.5	13.4	<1.00	4.14	<1.00	<3.00
	10-19-2011 <sup>e</sup>	<10.0 <sup>v</sup>	3.38	<1.00	3.95	2.69	<1.00	7	<5.00	49.9	12.2	<1.00	3.5	<1.00	<3.00
	10/16/2012	<10.0	67.8	<1.00	17.3	7.14	<1.00	120	<5.00	45.5	9.35	<1.00	5.23	<1.00	<3.00

TABLE 5

## GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes	
		MCL <sup>a</sup>	5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	5	200	5	5	2	10
MW-20	Sep-Oct 1994 <sup>c</sup>	<25	70	<5.0	110	90	<5.0	-	<5.0	1,800	760	20	26	-	<5.0	
	11/21/1997	<200 <sup>d</sup>	130	<10 <sup>d</sup>	70	230	<10 <sup>d</sup>	-	<100 <sup>d</sup>	1,020	316	14.4	38.2	-	<30 <sup>d</sup>	
	10/20/1998	<20	77.6	<1.0	61.2	221	4.6	-	<10	1,450	304	11.4	51.2	-	<3.0	
	10-20-98 <sup>e</sup>	<20	68.8	<1.0	73.4	219	3.2	-	<10	1,490	307	11.7	50.9	-	<3.0	
	10/20/1999	<40	58.9	<2.0	47.5	148	<2.0	-	<20	957	192	7.8	34.7	-	<6.0	
	10-20-99 <sup>e</sup>	<20	68.3	<1.0	57.7	168	1.8	-	<10	1,200	233	8.1	42.2	-	<3.0	
	11/9/2000	<20	74.1	<1.0	54.2	275	6.6	-	<5.0	915	222	7.1	48.6	-	<3.0	
	11/6/2001	<20	49.2	<1.0	17.1	279	3.2	-	<5.0	848	102	6.5	35.8	-	<15	
	10/22/2002	<20	43.3	<1.0	33	182	3.2	-	<5.0	1,330	168	6.3	46.8	<1.0	<3.0	
	10-22-02 <sup>e</sup>	<20	33	<1.0	47.7	182	2.3	-	<5.0	1,250	216	5.9	56.4	<1.0	<3.0	
	11/19/2003	<20.0	57.4	<1.00	45.9	158	3.9	32.5	<5.00	1,080	143	4.85	39.8	<1.00	<3.00	
	11-19-03 <sup>e</sup>	<20.0	64.9	<1.00	57.3	176	4.03	43.8	<5.00	1,090	166	5.02	45.7	<1.00	<3.00	
	11/10/2004	<20.0	47.9	<1.00	40.5	124	4.45	90.9	<5.00	590	121	3.84	31.7	<1.00	<3.00	
	11/16/2005	<20.0	47.7	<1.00	50.6	140	3.4	<30	<5.00	967	163	3.57	42.5	<1.00	<3.00	
	11/17/2006	<10.0	41.1	<1.00	36.2	107	6.39	83	<5.00	642	102	3.1	30.4	1.81	<3.00	
	10/10/2007	<10.0	27.2	<1.00	62.8	90.4	5.39	66	<5.00	582	45.3	2.69	29.3	2.96	<3.00	
	10/30/2008 (PD)	<50.0	15.8	<5.00	10.6	41.4	<5.00	-	<25 <sup>d</sup>	88.8	25.9	<5.00	8.7	<5.00 <sup>d</sup>	<15.0 <sup>d</sup>	
	10/30/08 (RP)	-	-	-	-	-	-	64	-	-	-	-	-	-	-	
	10/30/08 (LF)	<50.0	27.6	<5.00	25.3	71.6	<5.00	54	<25 <sup>d</sup>	535	65.8	<5.00	23.2	<5.00 <sup>d</sup>	<15.0 <sup>d</sup>	
	10/15/2009	<10.0	26.5	<1.00	21	57.4	2.37	39	<5.00	408	67	1.65	21.7	<1.00	<4.00	
	10/20/2010	<10.0	38.2	<1.00	89.6	55.8	2.98	42	<5.00	719 <sup>v</sup>	137	2.52	22.4	<1.00	<6.00	
	10/19/2011	<100 <sup>y</sup>	15	<10.0 <sup>d</sup>	<20.0 <sup>d</sup>	34.9	<10.0	34	<50.0 <sup>d</sup>	452	55.8	<10.0 <sup>d</sup>	16.4	<10.0 <sup>d</sup>	<30.0 <sup>d</sup>	
	10/17/2012	u	u	u	u	u	u	u	u	u	u	u	u	u	u	

TABLE 5

## GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes
		MCL <sup>a</sup>	5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	200	5	5	2	10
MW-29 <sup>w</sup>	10/22/2002	<20	<1.0	<1.0	<2.0	3.5	<1.0	-	<5.0	6.1	1.1	<1.0	4.3	<1.0	<3.0
MW-R30	10/22/2002	<20	<1.0	<1.0	<2.0	2.8	<1.0	-	<5.0	1.4	<1.0	<1.0	<1.0	<1.0	<3.0
	11/17/2003	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/9/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/15/2005	<20.0	<1.00	<1.00	<2.00	1.47	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/14/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/9/2007	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/29/2008 (PD)	<10.0 <sup>d</sup>	<1.00	<1.00	<2.00	2.06	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/29/2008 (LF)	<10.0 <sup>d</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	10.2	<1.00	<1.00	<1.00	<1.00	<3.00
	10/15/2009	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	63.6	3.07	<1.00	37.6 <sup>t</sup>	<1.00	<4.00
	10/20/2010	<10.0	<1.00 <sup>g</sup>	<1.00	<2.00 <sup>g</sup>	29.4 <sup>g</sup>	<1.00	-	<5.00	3.83 <sup>y</sup>	<5.00	<1.00	74.8	<1.00 <sup>g</sup>	<6.00
MW-31	10/19/2011	<10.0 <sup>d</sup>	<1.00	<1.00	<2.00	91.4	<1.00	-	<5.00	<1.00	<1.00	<1.00	3.04	<1.00	<3.00
	10/16/2012	<10.0	<1.00	<1.00	<2.00	34.2	<1.00	-	<5.00	24.9	1.07	<1.00	59.2	<1.00	<3.00
	Sep-Oct 1994 <sup>c</sup>	<25	<5.0	<5.0	<5.0	8.3	<5.0	-	<5.0	36	25	<5.0	19	-	<5.0
	11/21/1997	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/20/1998	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/20/1999	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	11/9/2000	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	-	<3.0
	11/6/2001	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/22/2002	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	11/17/2003	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/8/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/16/2005	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/13/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/8/2007	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/27/2008 (PD)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/27/2008 (LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	11.3	<1.00	<1.00	<1.00	<1.00	<3.00
	10/15/2009	<10.0	<1.00	<1.00	<2.00 <sup>d</sup>	<1.00	<1.00	-	<5.00	5.72	<1.00	<1.00	<1.00	<1.00	<4.00
	10/20/2010	<10.0	<1.00 <sup>g</sup>	<1.00	<2.00 <sup>g</sup>	<1.00	<1.00	-	<5.00	2.04 <sup>y</sup>	<5.00	<1.00	2.21	<1.00 <sup>g</sup>	<6.00
	10/19/2011	<10.0 <sup>d</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	11.8	<1.00	<1.00	<1.00	<1.00	<3.00
	10/17/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00

TABLE 5  
GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes	
		MCL <sup>a</sup>	5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	5	200	5	5	2	10
MW-32	Sep-Oct 1994 <sup>c</sup>	<25	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0	
	11/21/1997	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	220	<1.0	<1.0	<1.0	-	<3.0	
	10/20/1999	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0	
	11/6/2001	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	1.9 <sup>m</sup>	<1.0	<1.0	<1.0	-	<3.0	
	10/22/2002	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	
	11/8/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	11/14/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	10/28/2008 (LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	10/20/2010	<10.0	<1.00 <sup>g</sup>	<1.00	<2.00 <sup>g</sup>	<1.00 <sup>g</sup>	<1.00	-	<5.00	<1.00 <sup>v</sup>	<5.00	<1.00 <sup>v</sup>	2.5	<1.00 <sup>g</sup>	<6.00	
	10/17/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
MW-33	11/15/2005	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	11/13/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<5.19	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	10/8/2007	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	10/28/2008 (PD)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	10/28/2008 (RP)	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	
	10/28/2008(LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00 <sup>g</sup>	<2.0	<5.00	19.9	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/15/2009	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	3.18	<1.00	<1.00	<1.00	<1.00	<4.00	
	4/19/2010	<10.0 <sup>v</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<5.00	<1.00	<1.00	<2.00	<3.00	
	10/20/2010	<10.0	<1.00	<1.00	2.75	<1.00	<1.00	<2.0	<5.00	54.6	3.95	<1.00	<1.00	<1.00	<3.00	
	3/31/2011	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	3-31-2011 <sup>e</sup>	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	7/17/2011	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00 <sup>g</sup>	<3.00 <sup>f</sup>	
	7-17-2011 <sup>e</sup>	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	10/19/2011	<10.0 <sup>v</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	3.55	<1.00	<1.00	<1.00	<1.00	<3.00	
	10-17-2012 <sup>e</sup>	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<1.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
	10/17/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<1.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	

TABLE 5

## GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes
		5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	5	200	5	5	2	10
MW-34	10/20/2010	<10.0	<1.00 <sup>a</sup>	<1.00	<2.00 <sup>a</sup>	<1.00 <sup>a</sup>	<1.00	<2.0	<5.00	<1.00 <sup>a</sup>	<5.00	<1.00	<1.00	<1.00 <sup>a</sup>	<6.00
	10/19/2011	<10.0 <sup>a</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	10.7	<1.00	<1.00	<1.00	<1.00	<3.00
	12/12/2011	<10.0 <sup>a</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00 <sup>a</sup>	<3.00
	10/16/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<1.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
Trip Blank	11/21/1997	<20	<1.0	<2.0	<1.0	<1.0	-	<10	1.2 <sup>a</sup>	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/20/1998	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<10	<1.0	<1.0	<1.0	<1.0	-	<3.0
	11/6/2001	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	-	<3.0
	10/22/2002	<20	<1.0	<1.0	<2.0	<1.0	<1.0	-	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	11/8/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/10/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/15/2005	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/16/2005	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/13/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<5.19	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/13/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/13/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/8/2007	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0 <sup>f</sup>	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/10/2008 <sup>p</sup>	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/27/2008	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00 <sup>a</sup>	<2.0	10.7 <sup>j</sup>	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/29/2008	<10.0 <sup>a</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	9.81 <sup>i</sup>	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	4/19/2010	<10.0 <sup>a</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<5.00	<1.00	<1.00	<2.00	<3.00
	10/20/2010	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00 <sup>a</sup>	<5.00	<1.00	<1.00	<1.00	<3.00
	3/31/2011	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00 <sup>a</sup>	<1.00	<1.00	<1.00	<1.00 <sup>a</sup>	<3.00
	7/17/2011	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00 <sup>a</sup>	<3.00
	10/19/2011	<10.0 <sup>a</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	12/13/2011	<10.0 <sup>a</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00 <sup>a</sup>	<3.00
	10/17/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<1.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00

TABLE 5

## GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes
		5,500 <sup>b</sup>	810 <sup>b</sup>	5	7	70	100	6.1 <sup>b</sup>	5	5	200	5	5	2	10
Equipment	11/18/2003	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
Blank	11/8/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/9/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/10/2004	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	12.9	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/15/2005	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/16/2005	<20.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/13/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<5.19	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/14/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<5.19	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/15/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	11/17/2006	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/8/2007	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	1.05	<1.00	<1.00	<1.00	<1.00	<3.00
	10/9/2007	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/10/2008 <sup>b</sup> (PD)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	-	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/10/2008 <sup>b</sup> (RP)	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-
	10/27/2008 (LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/28/2008 (LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/29/2008 (LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/30/2008 (LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/31/2008 (LF)	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/15/2009	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<4.00
	10/15/2009	<10.0	<10.0	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<4.00
	10/20/2010	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00 <sup>y</sup>	<5.00	<1.00	<1.00	<1.00	<3.00
	10/20/2010	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<2.0	<5.00	<1.00 <sup>y</sup>	<5.00	<1.00	<1.00	<1.00	<6.00
	3/31/2011	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	7/17/2011	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/19/2011	<10.0 <sup>x</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/19/2011	<10.0 <sup>y</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	12/12/2011	<10.0 <sup>x</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00 <sup>y</sup>	<3.00
	12/13/2011	<10.0 <sup>x</sup>	<1.00	<1.00	<2.00	<1.00	<1.00	<6.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00 <sup>y</sup>	<3.00
	10/16/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<1.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
	10/17/2012	<10.0	<1.00	<1.00	<2.00	<1.00	<1.00	<1.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00

TABLE 5  
GROUNDWATER ANALYTICAL RESULTS (ug/L)

Monitoring Well	Date	Acetone	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,4-Dioxane	Methylene Chloride	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride	Total Xylenes
MCL <sup>a</sup>		<b>5,500<sup>b</sup></b>	<b>810<sup>b</sup></b>	<b>5</b>	<b>7</b>	<b>70</b>	<b>100</b>	<b>6.1<sup>b</sup></b>	<b>5</b>	<b>5</b>	<b>200</b>	<b>5</b>	<b>5</b>	<b>2</b>	<b>10</b>

Notes:

- <sup>a</sup> Bold data values are above MCL.
- <sup>b</sup> Region 9 Preliminary Remediation Goal.
- <sup>c</sup> Harding Lawson Associates.
- <sup>d</sup> Estimated result.
- <sup>e</sup> Duplicate.
- <sup>f</sup> Analyte detected in associated method blank. Sample rerun, but past holding time.
- <sup>g</sup> Detection limited by laboratory dilution ratio.
- <sup>h</sup> Only one duplicate required for 1,4-dioxane samples.
- <sup>i</sup> Reporting limit elevated due to matrix interferences.
- <sup>j</sup> Estimated quantitation limit.
- <sup>k</sup> Holding time exceedance.
- <sup>l</sup> Analysis not required per November 2, 2005, e-mail correspondence from Spencer Dulaney of United States Environmental Protection Agency (USEPA) to James Aycock of USEPA.
- <sup>m</sup> Possible carryover from previous sample at laboratory.
- <sup>n</sup> Suspected to be carryover from sample analyzed immediately prior.
- <sup>o</sup> Not analyzed.
- <sup>p</sup> Collected during initial installation of PD and RP samplers
- <sup>q</sup> Calibration verification recovery outside the method control limits.
- <sup>r</sup> Laboratory control sample was outside acceptance criteria.
- <sup>s</sup> Common lab contaminant.
- <sup>t</sup> MS/MSD were outside control limits.
- <sup>u</sup> Not enough water volume in well to sample.
- <sup>v</sup> The % RSD for this compound was above 15%.
- <sup>w</sup> Monitoring well abandoned 12/2011

µg/L	= Micrograms per liter.
1,1-DCA	= 1,1-Dichloroethane.
1,2-DCA	= 1,2-Dichloroethane.
1,1-DCE	= 1,1-Dichloroethene.
cis-1,2-DCE	= cis-1,2-Dichloroethene.
trans-1,2-DCE	= trans-1,2-Dichloroethene.
PCE	= Tetrachloroethene.
1,1,1-TCA	= 1,1,1-Trichloroethane.
1,1,2-TCA	= 1,1,2-Trichloroethane.
TCE	= Trichloroethene.
MCL	= Maximum contaminant level.
LF	= Low-flow sampling method
PD	= Polyethylene diffusion bag sampler
RP	= Rigid porous polyethylene sampler

TABLE 6  
RELATIVE PERCENT DIFFERENCES

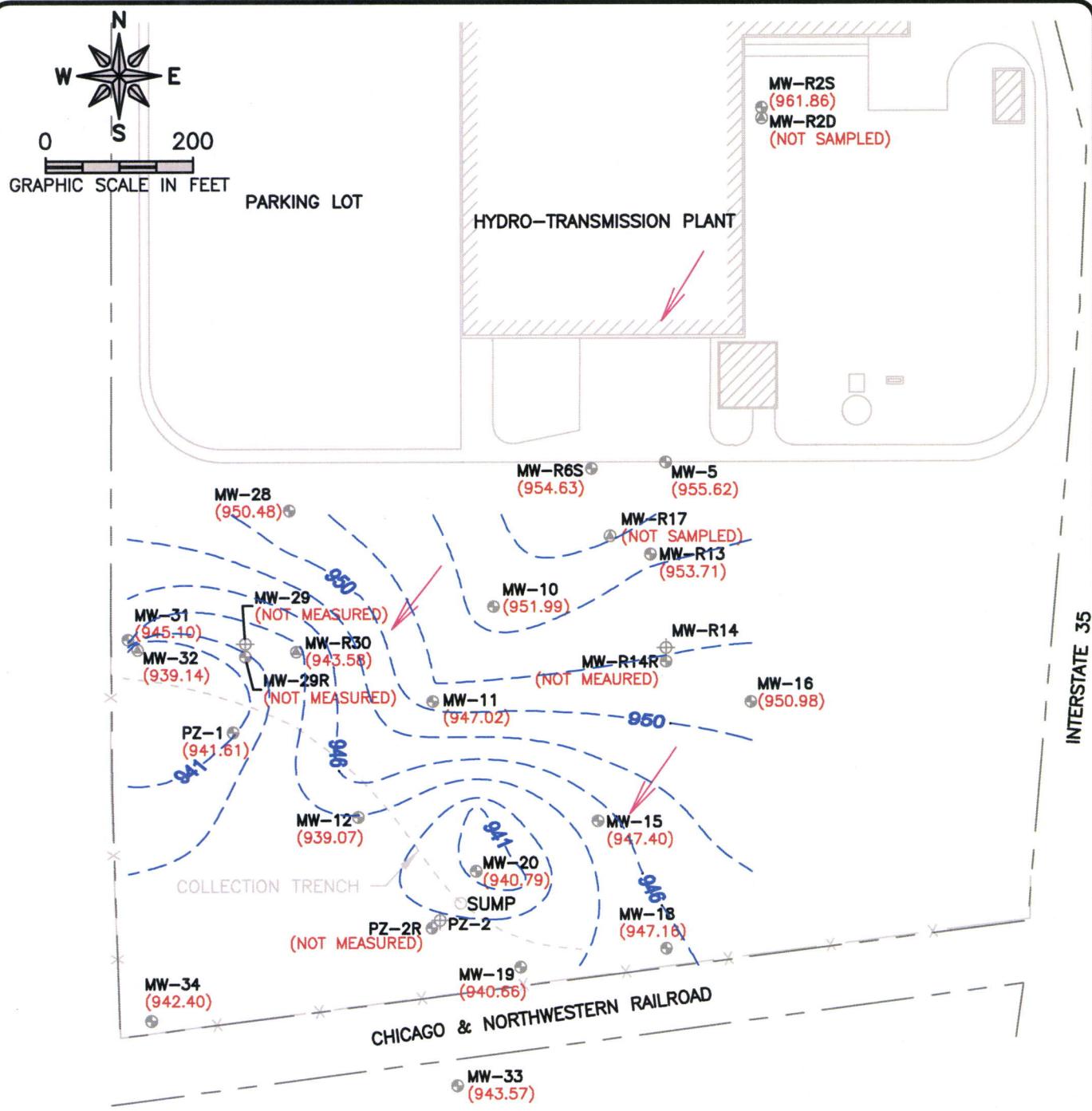
CONSTITUENT CONCENTRATIONS IN MW-33 AND RESPECTIVE DUPLICATE  
10/16/2012 to 10/17/2012 SAMPLING EVENT

Analyte	MW-33 (mg/L)	Duplicate (mg/L)	RPD (%)
Acetone	<10.0	<10.0	N/A
1,1-Dichloroethane	<1.0	<1.0	N/A
1,2-Dichloroethane	<1.00	<1.00	N/A
1,1-Dichloroethene	<2.0	<2.0	N/A
cis-1,2-Dichloroethene	<1.0	<1.0	N/A
trans-1,2-Dichloroethene	<1.00	<1.00	N/A
1,4-Dioxane *	<1.0	<1.0	N/A
Methylene Chloride	<5.0	<5.0	N/A
Tetrachloroethene	<1.0	<1.00	N/A
1,1,1-Trichloroethane	<1.0	<1.00	N/A
1,1,2-Trichloroethane*	<1.00	<1.00	N/A
Trichloroethene	<1.0	<1.00	N/A
Vinyl Chloride	<1.00	<1.00	N/A
Total Xylenes	<3.00	<3.00	N/A

Notes:

RPD = Relative percent difference.  
 (mg/L) = Micrograms per liter.  
 NA = Not applicable.  
 % = Percent.

## **FIGURES**



#### LEGEND

MONITORING WELL (ABANDONED 12/2011)

● SHALLOW MONITORING WELL

○ DEEP MONITORING WELL

(950.67) SHALLOW GROUNDWATER ELEV. IN FEET  
NGVD

SHALLOW GROUNDWATER ELEV. CONTOUR

→ INFERRED DIRECTION OF  
GROUNDWATER FLOW

COLLECTION TRENCH (WATER ELEV.  
940.43 MEASURE ON 10/20/10)

G:\EGLPT\13\13-233\13-233 Base.dwg, 1

## FIGURE 1

SHALLOW GROUNDWATER FLOW  
OCTOBER 16, 2012  
SAUER-DANFOSS FACILITY  
AMES, IOWA

4/18/13

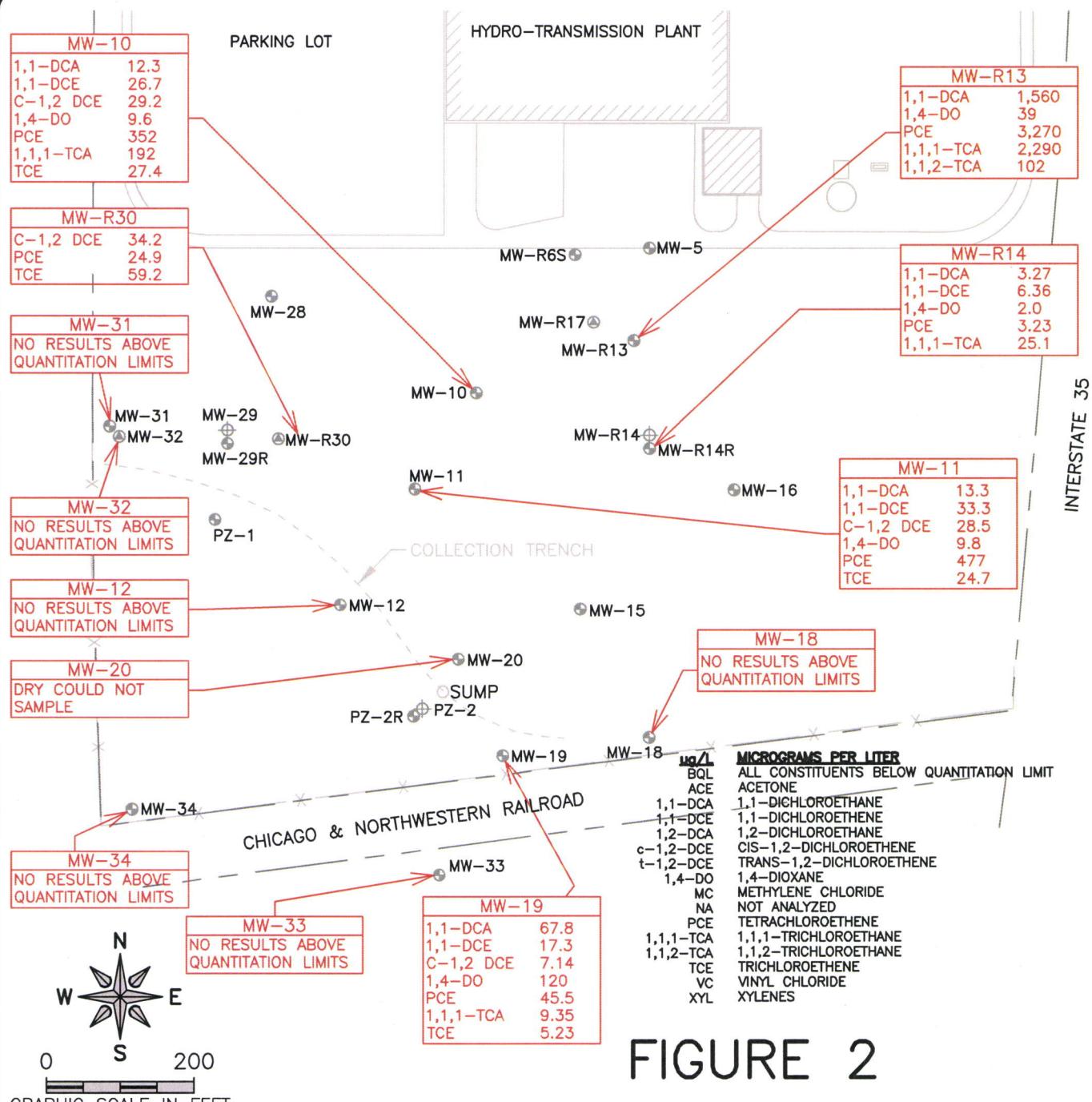
**FEHR GRAHAM**

ENGINEERING & ENVIRONMENTAL  
ILLINOIS DESIGN FIRM NO. 184-003325

ILLINOIS

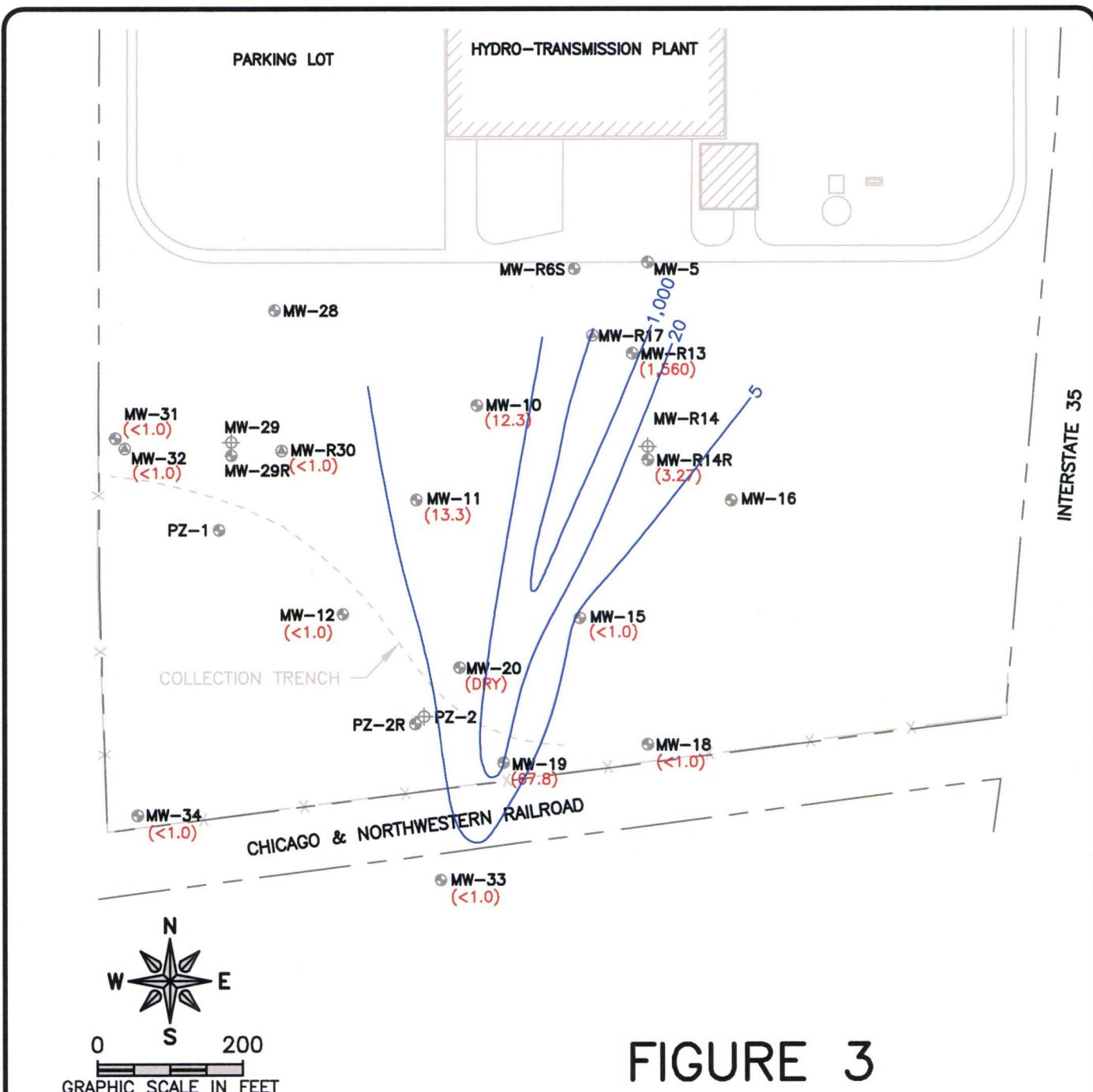
IOWA

WISCONSIN



**FIGURE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**ABOVE QUANTITATION LIMIT**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

4/18/13

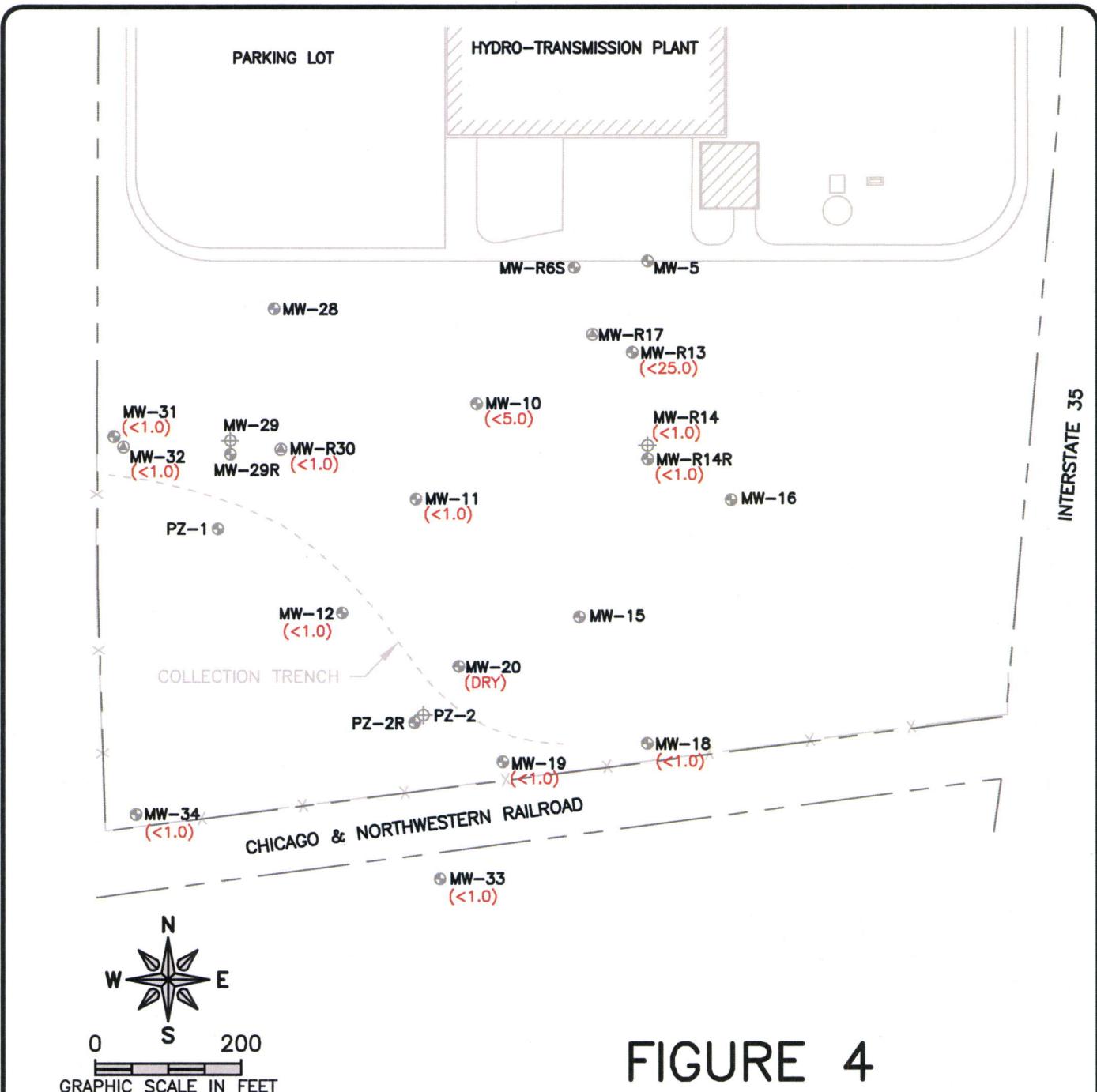


**FIGURE 3**  
**SHALLOW GROUNDWATER**  
**1,1-DICHLOROETHANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

4/18/13

**LEGEND**

- ⊕ MONITORING WELL (ABANDONED 12/2011)
- SHALLOW MONITORING WELL
- ◎ DEEP MONITORING WELL
- (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
- ~~~~ ISO-CONCENTRATION CONTOUR

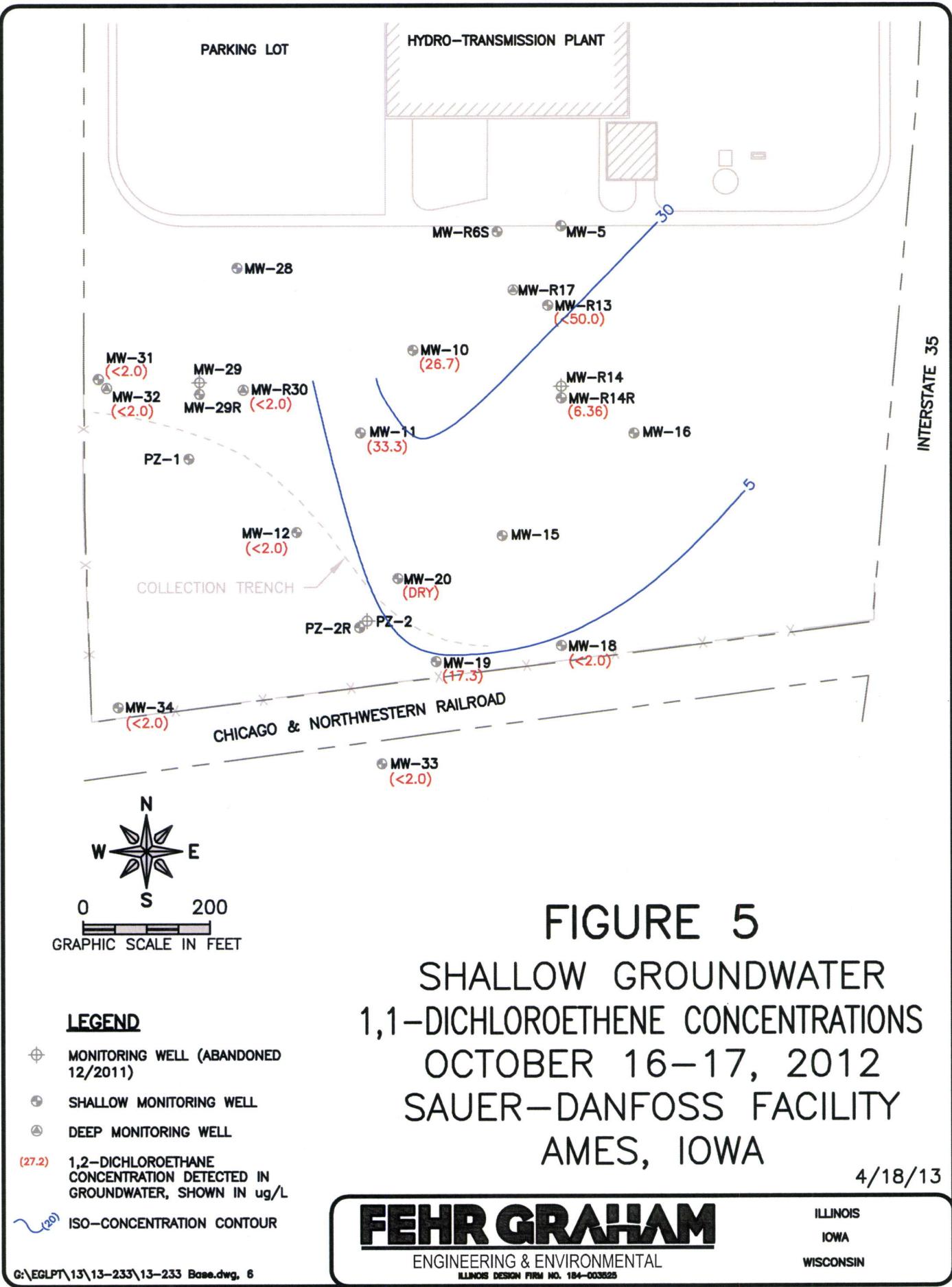


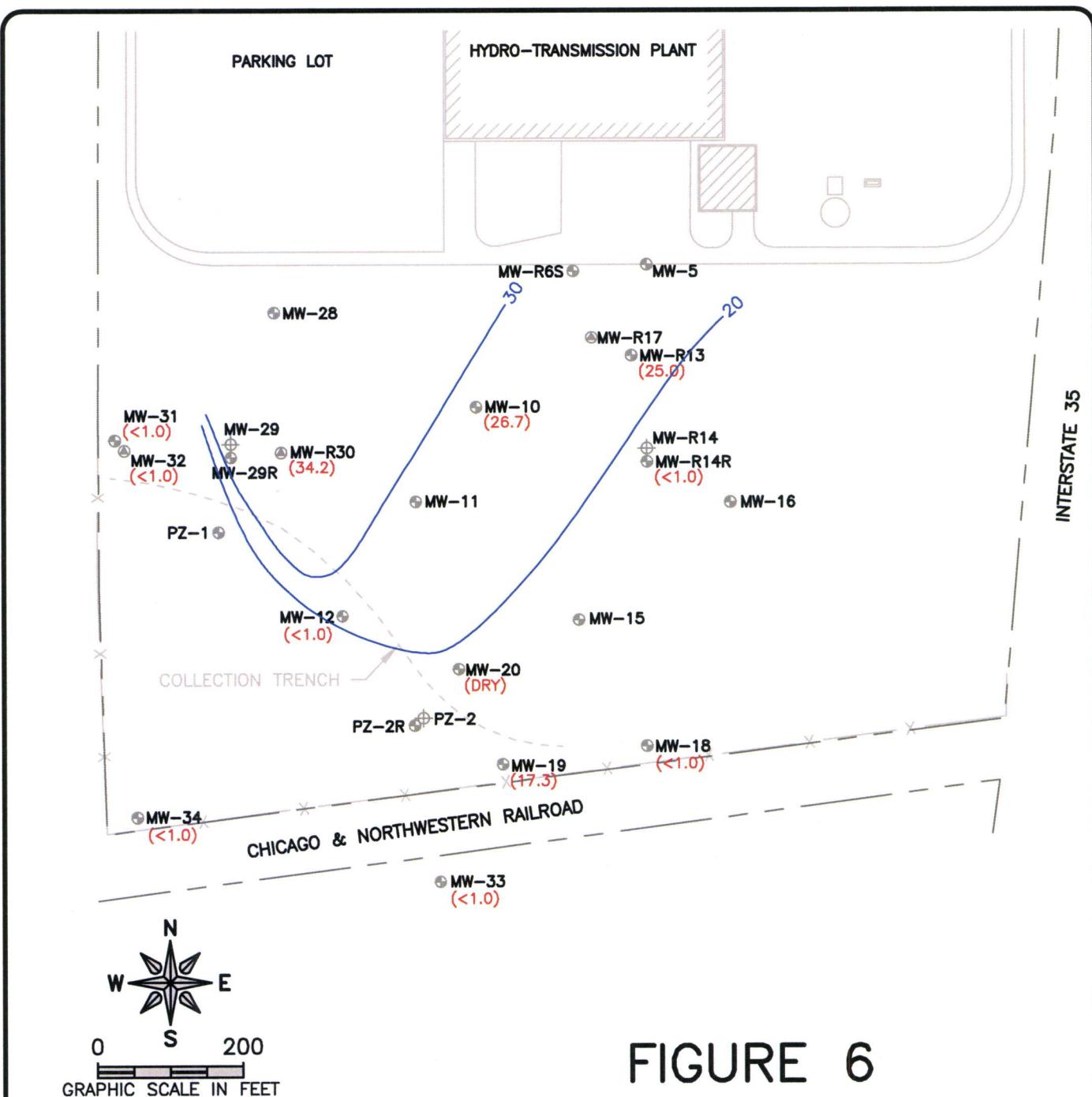
**FIGURE 4**  
**SHALLOW GROUNDWATER**  
**1,2-DICHLOROETHANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

**LEGEND**

- ⊕ MONITORING WELL (ABANDONED 12/2011)
- ⊕ SHALLOW MONITORING WELL
- ⊕ DEEP MONITORING WELL
- (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
- ~~~~ ISO-CONCENTRATION CONTOUR

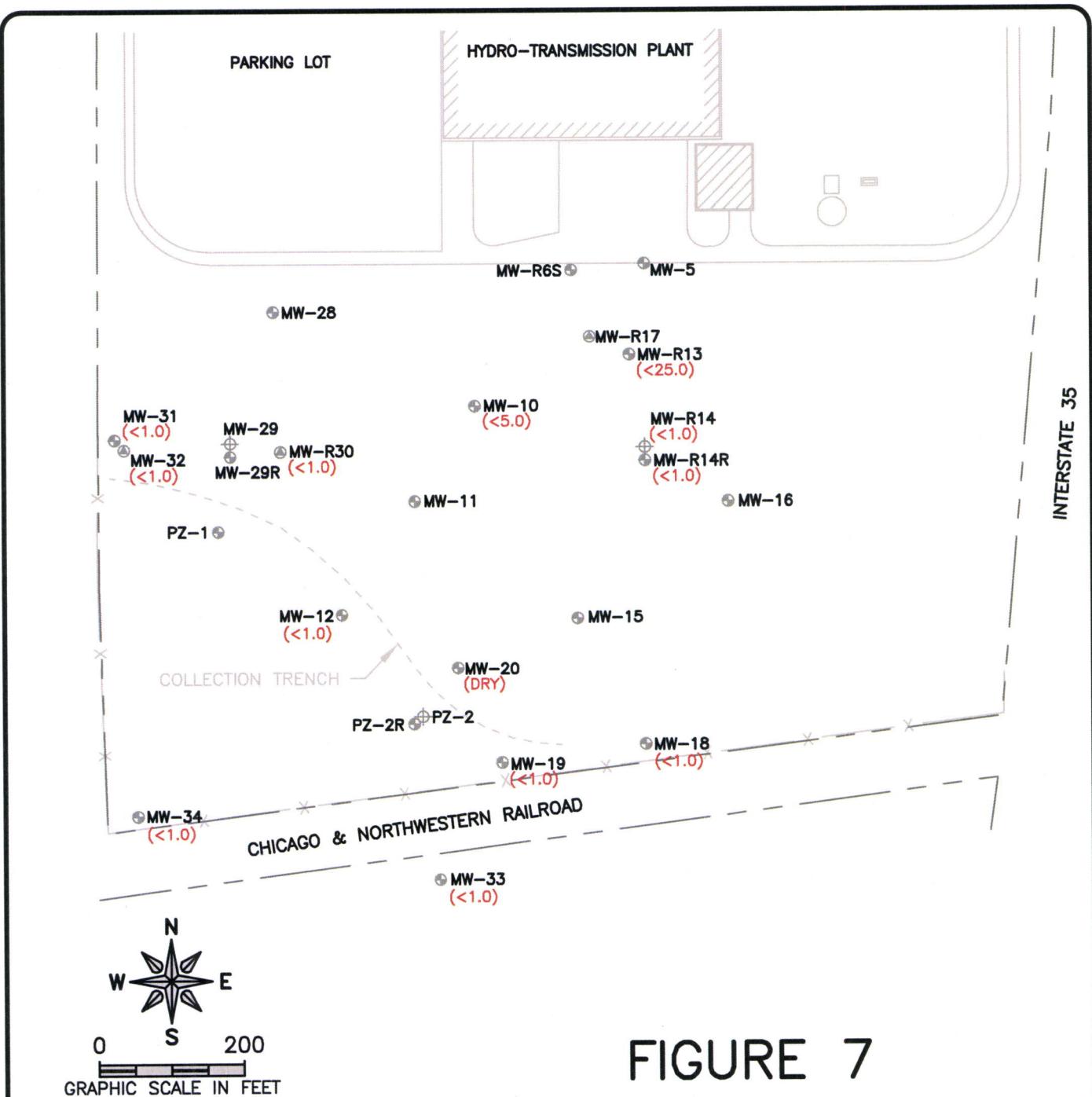




**FIGURE 6**  
**SHALLOW GROUNDWATER**  
**CIS-1,2-DICHLOROETHENE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

4/18/13

- LEGEND**
- MONITORING WELL (ABANDONED 12/2011)
  - SHALLOW MONITORING WELL
  - DEEP MONITORING WELL
  - 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
  - ISO-CONCENTRATION CONTOUR

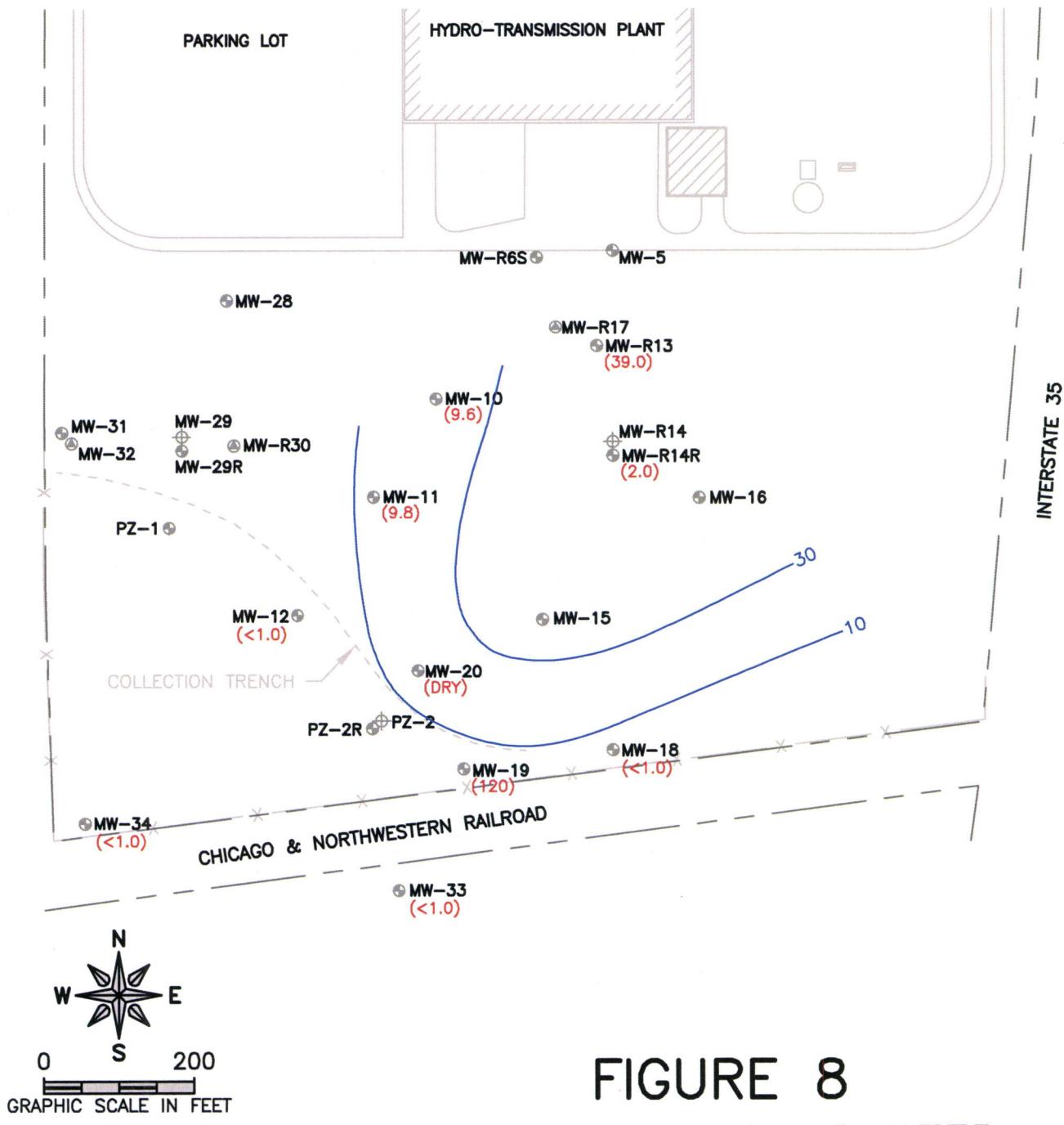


**FIGURE 7**  
**SHALLOW GROUNDWATER**  
**TRANS-1,2-DICHLOROETHENE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

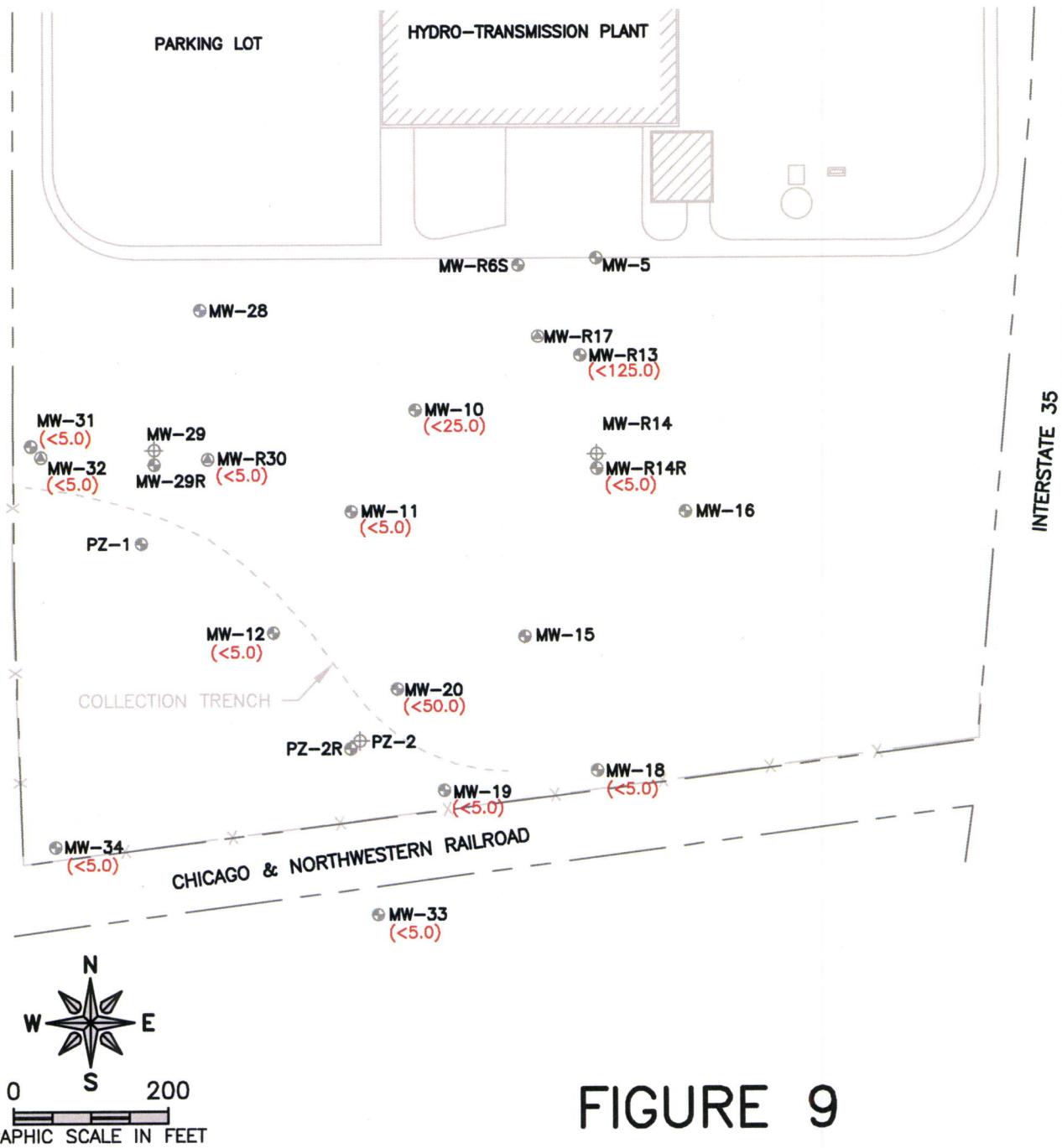
**LEGEND**

- ⊕ MONITORING WELL (ABANDONED 12/2011)
- ⊕ SHALLOW MONITORING WELL
- Ⓐ DEEP MONITORING WELL
- (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
- ~~~~ ISO–CONCENTRATION CONTOUR



**FIGURE 8**  
**SHALLOW GROUNDWATER**  
**1,4-DIOXANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

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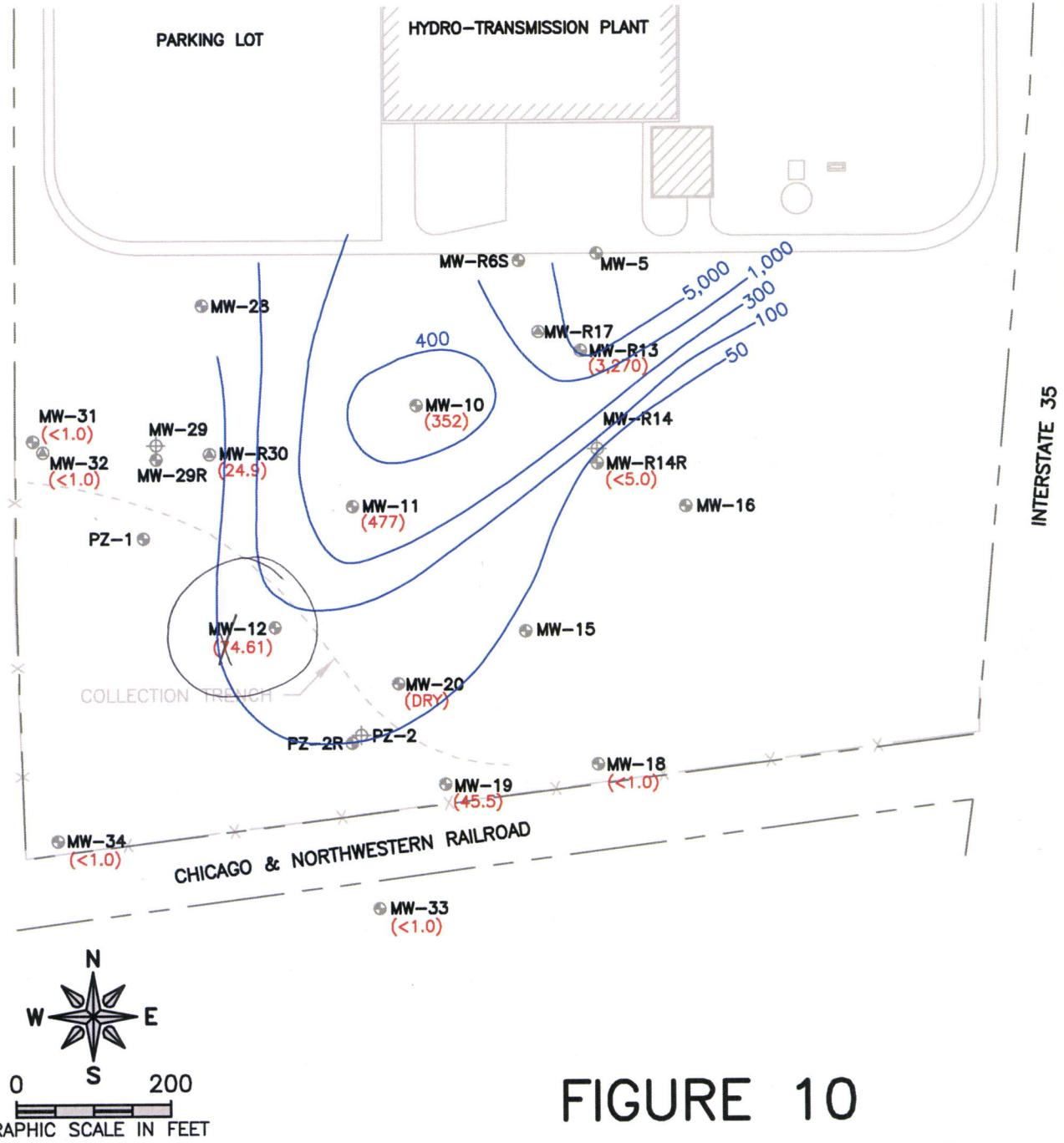


**FIGURE 9**  
**SHALLOW GROUNDWATER**  
**METHYLENE CHLORIDE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

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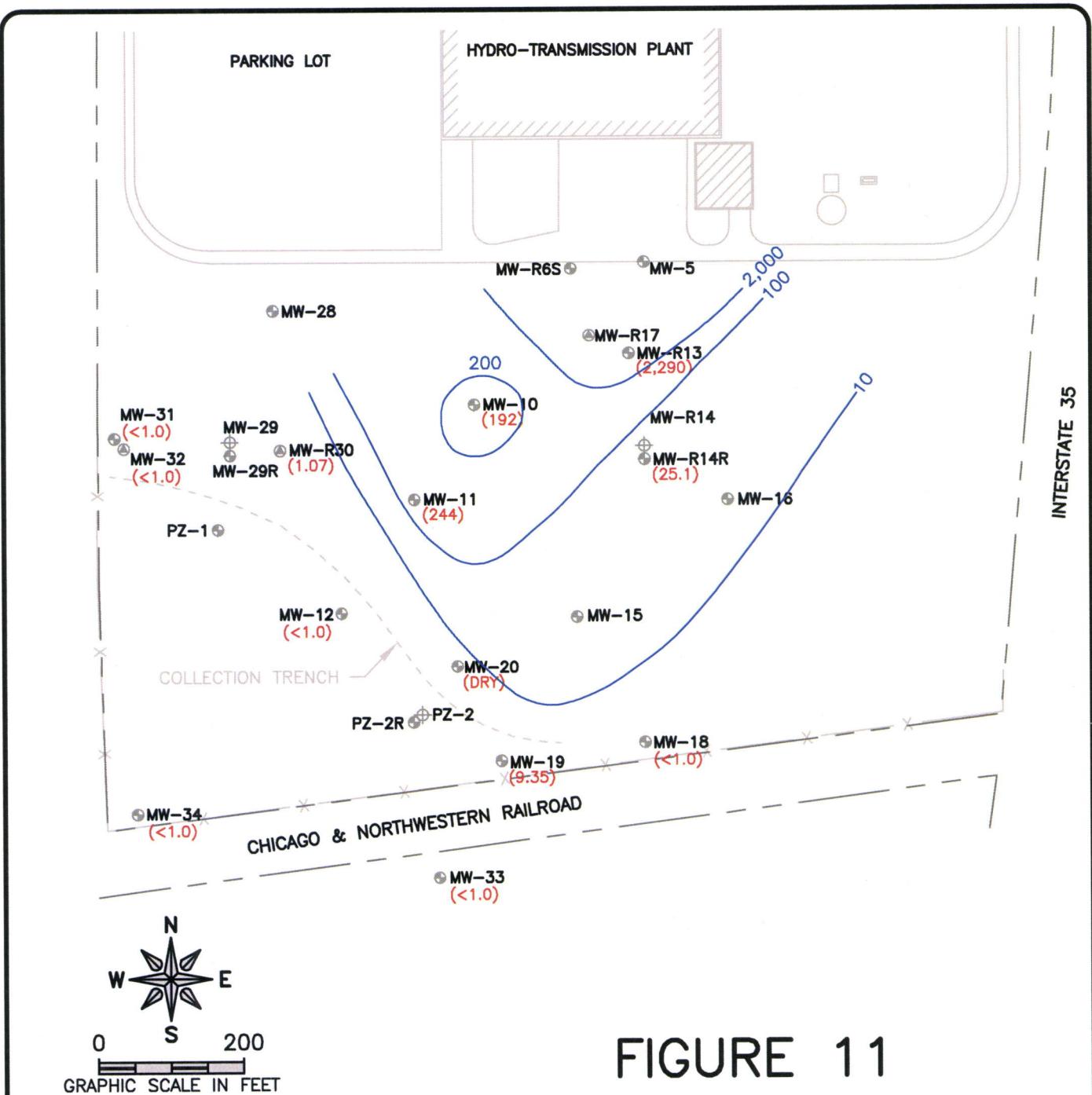
**LEGEND**

- MONITORING WELL (ABANDONED 12/2011)
- SHALLOW MONITORING WELL
- DEEP MONITORING WELL
- (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
- ISO–CONCENTRATION CONTOUR



**FIGURE 10**  
**SHALLOW GROUNDWATER**  
**TETRACHLOROETHENE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

4/18/13

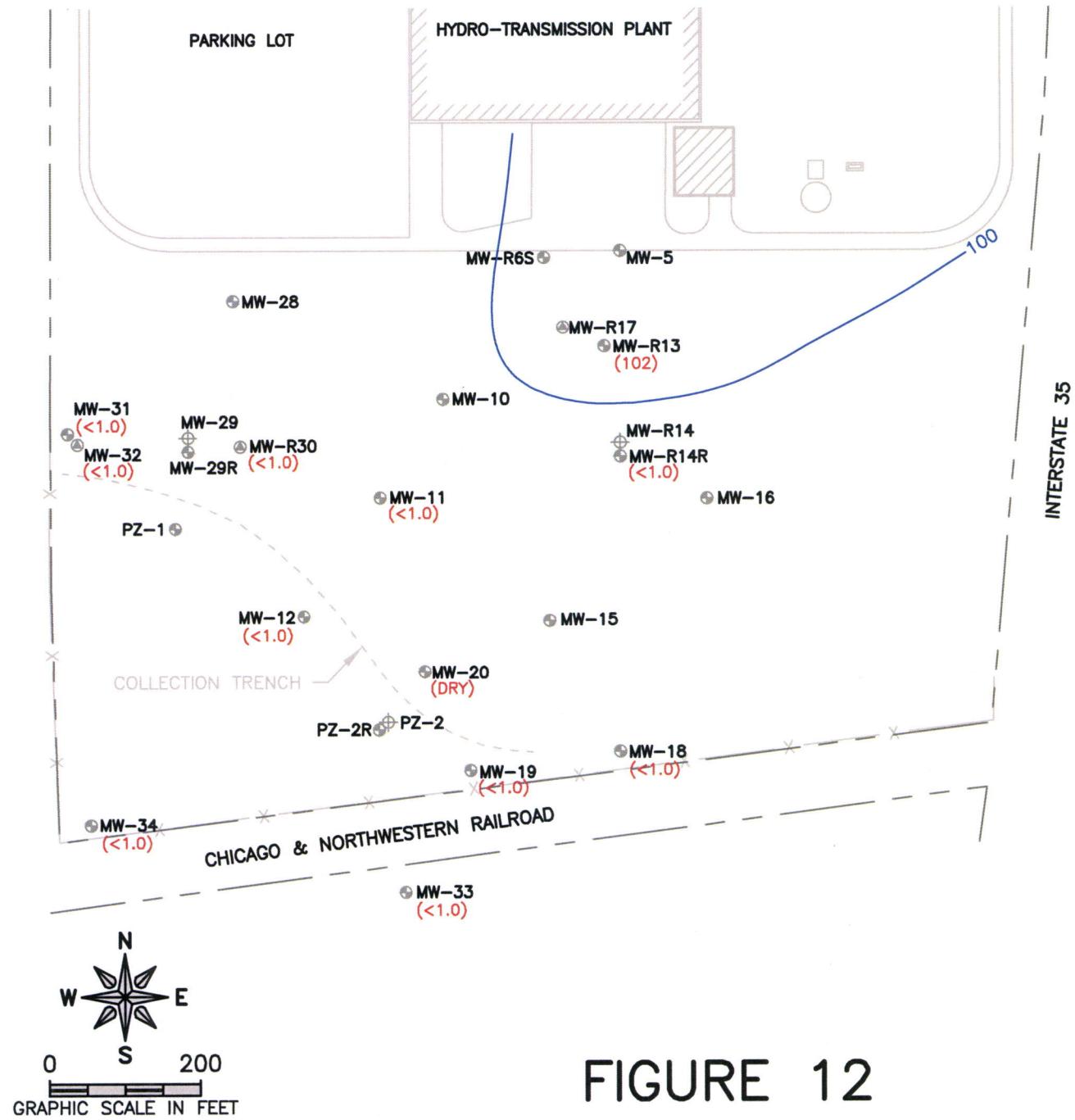


**FIGURE 11**  
**SHALLOW GROUNDWATER**  
**1,1,1-TRICHLOROETHANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

4/18/13

**LEGEND**

- ⊕ MONITORING WELL (ABANDONED 12/2011)
- ⊕ SHALLOW MONITORING WELL
- Ⓐ DEEP MONITORING WELL
- (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
- ~~~~ ISO–CONCENTRATION CONTOUR



**FIGURE 12**  
**SHALLOW GROUNDWATER**  
**1,1,2-TRICHLOROETHANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

4/18/13

- LEGEND**
- ⊕ MONITORING WELL (ABANDONED 12/2011)
  - ⊕ SHALLOW MONITORING WELL
  - Ⓐ DEEP MONITORING WELL
  - (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
  - ~~~~ ISO-CONCENTRATION CONTOUR

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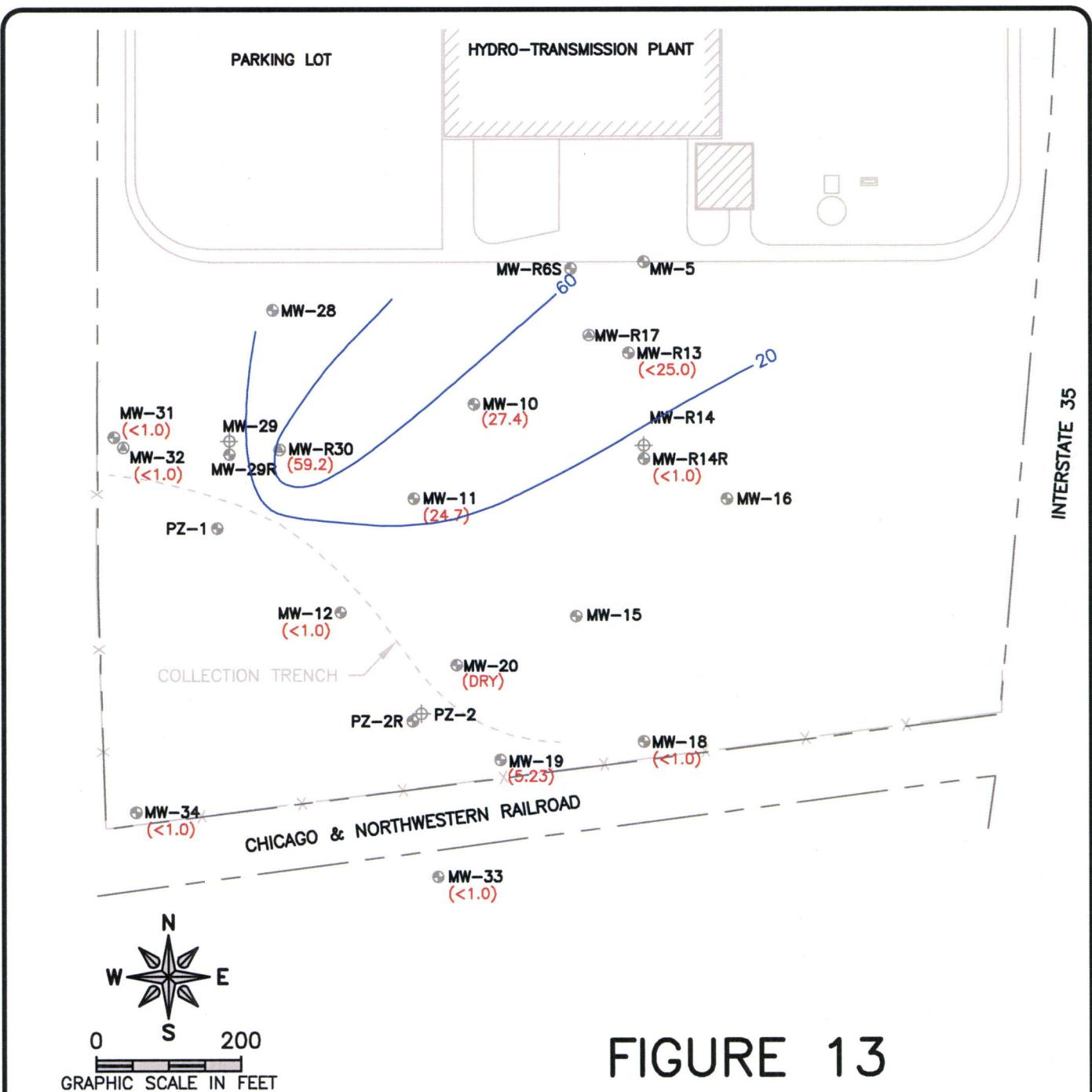
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**FIGURE 13**

**SHALLOW GROUNDWATER  
TRICHLOROETHENE CONCENTRATIONS  
OCTOBER 16–17, 2012  
SAUER–DANFOSS FACILITY  
AMES, IOWA**

4/18/13

**LEGEND**

- ⊕ MONITORING WELL (ABANDONED 12/2011)
- ⊕ SHALLOW MONITORING WELL
- ⊕ DEEP MONITORING WELL
- (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
- ~(20) ISO-CONCENTRATION CONTOUR

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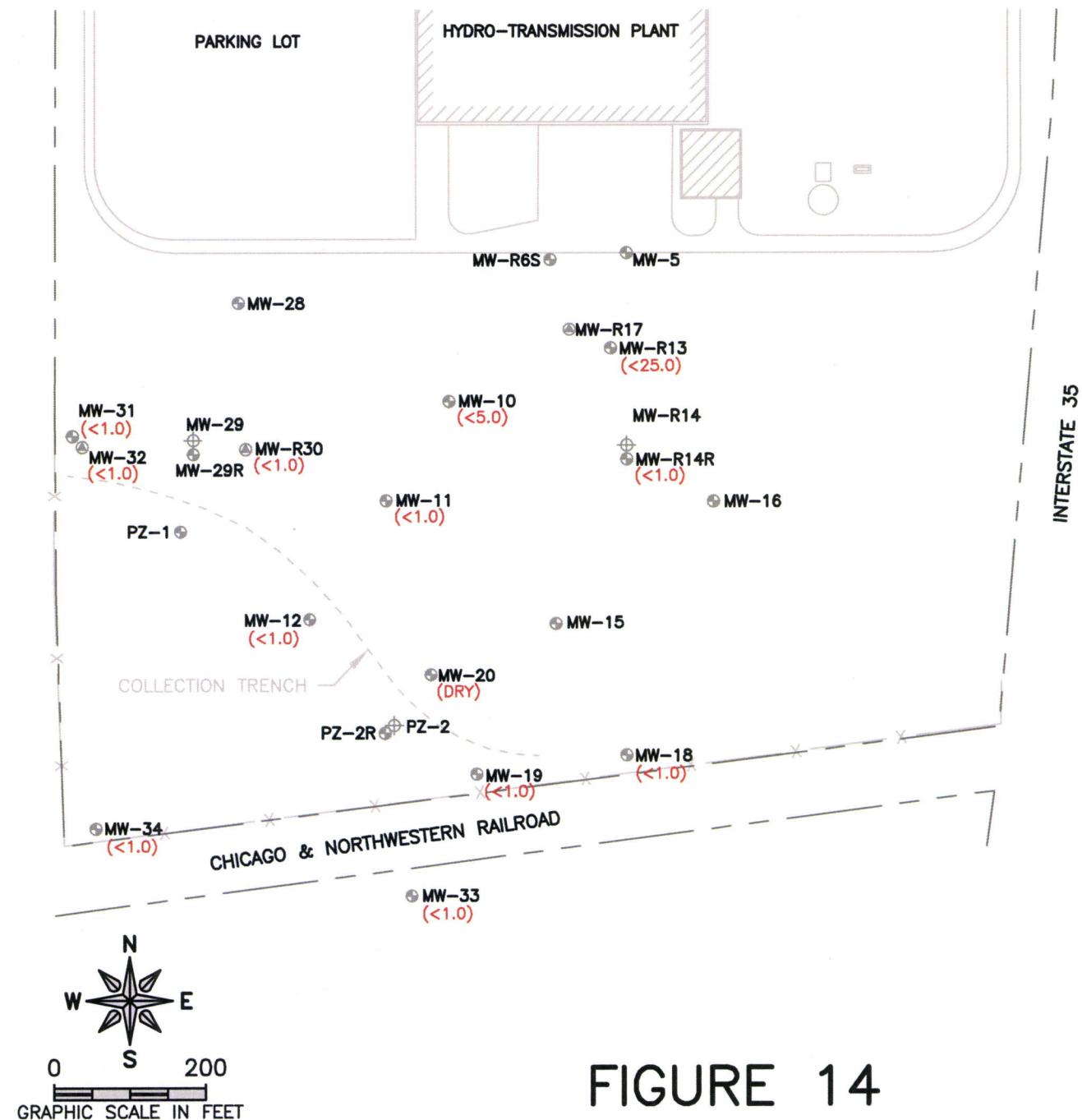
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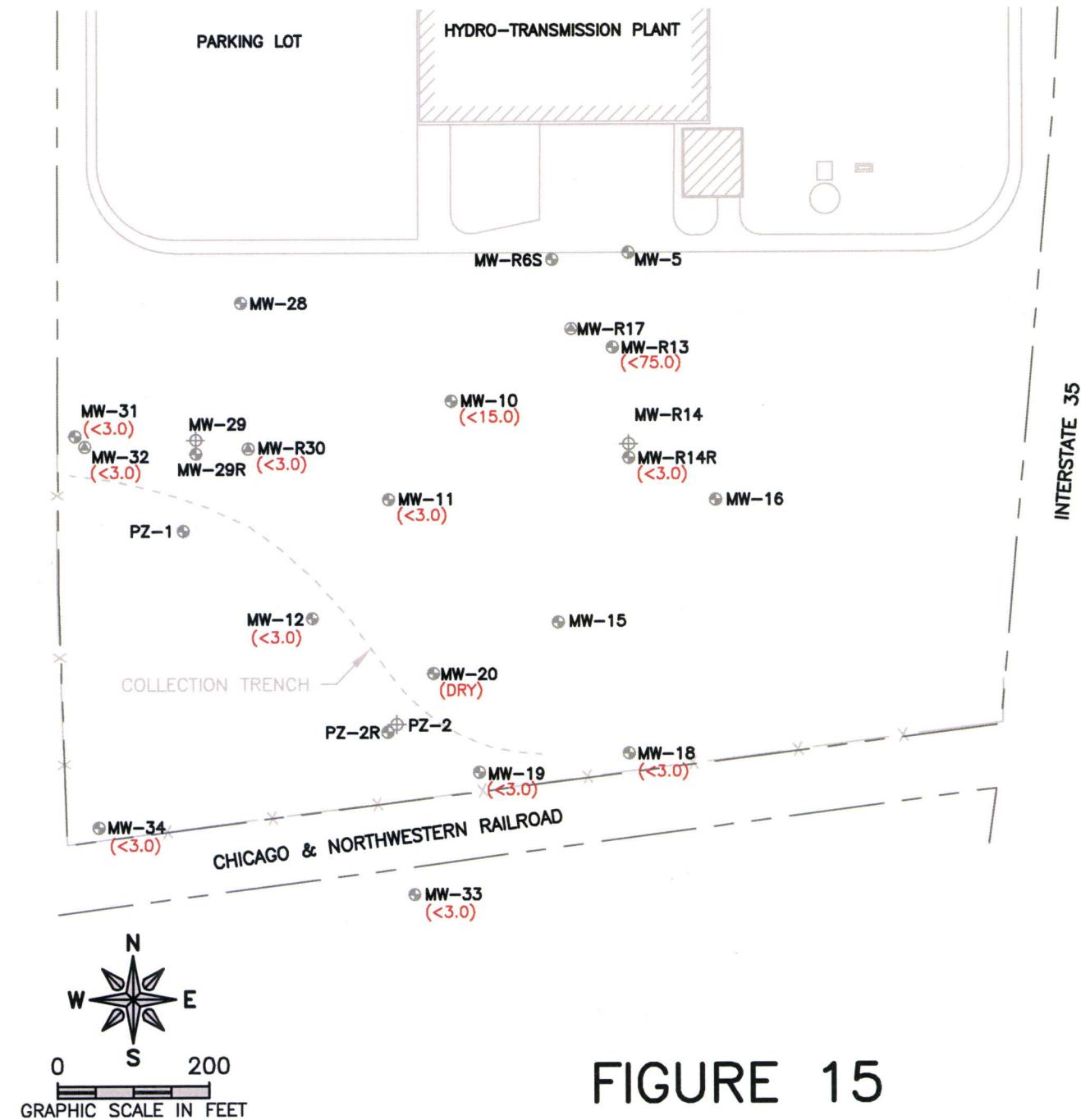


**FIGURE 14**  
**SHALLOW GROUNDWATER**  
**VINYL CHLORIDE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

**LEGEND**

- ⊕ MONITORING WELL (ABANDONED 12/2011)
- ⊕ SHALLOW MONITORING WELL
- Ⓐ DEEP MONITORING WELL
- (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
- (20) ISO–CONCENTRATION CONTOUR



#### LEGEND

- ⊕ MONITORING WELL (ABANDONED 12/2011)
- ⊕ SHALLOW MONITORING WELL
- Ⓐ DEEP MONITORING WELL
- (27.2) 1,2-DICHLOROETHANE CONCENTRATION DETECTED IN GROUNDWATER, SHOWN IN ug/L
- ~~~~ ISO-CONCENTRATION CONTOUR

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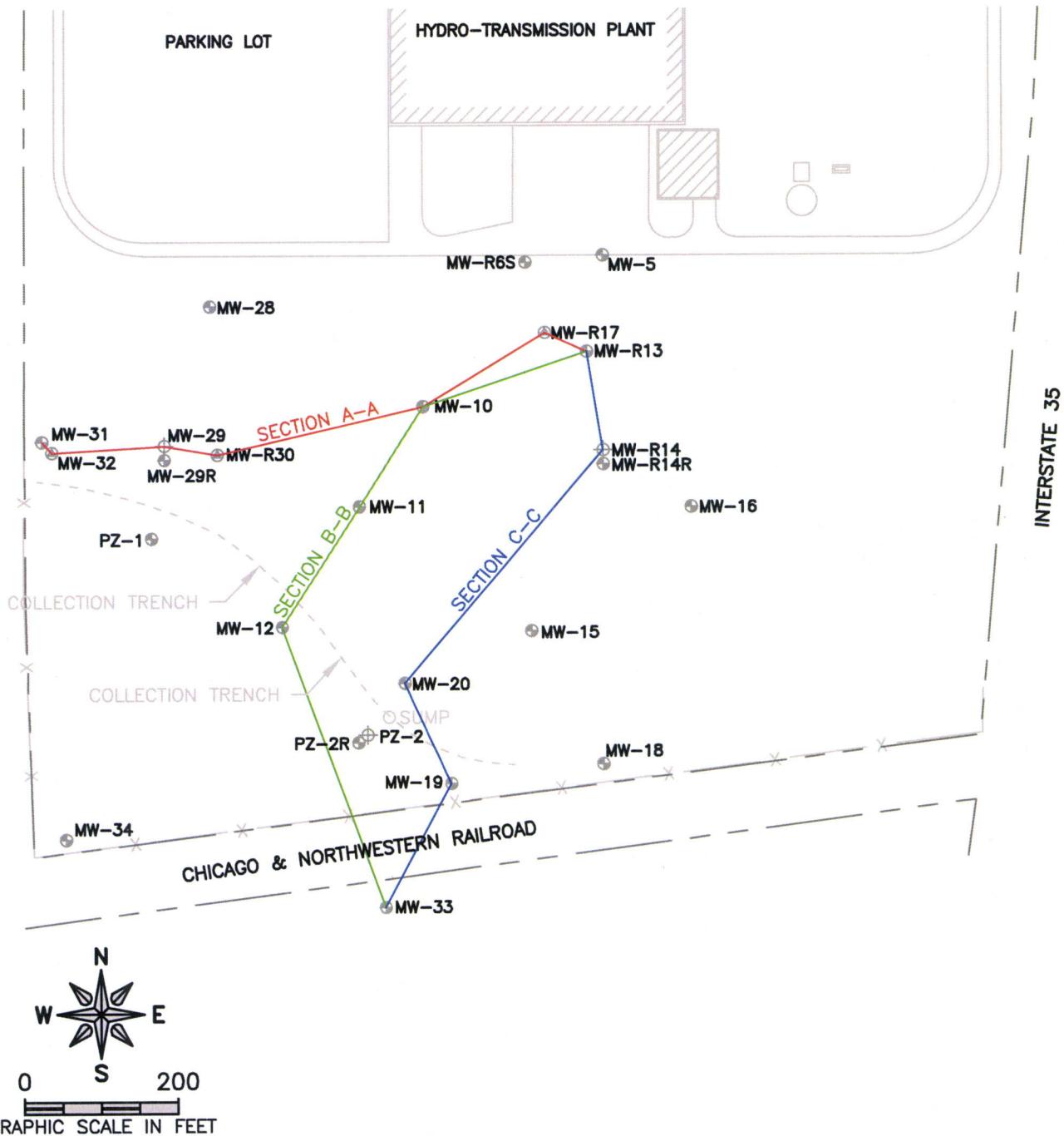
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**FIGURE 15**  
**SHALLOW GROUNDWATER**  
**TOTAL XYLEMES**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**



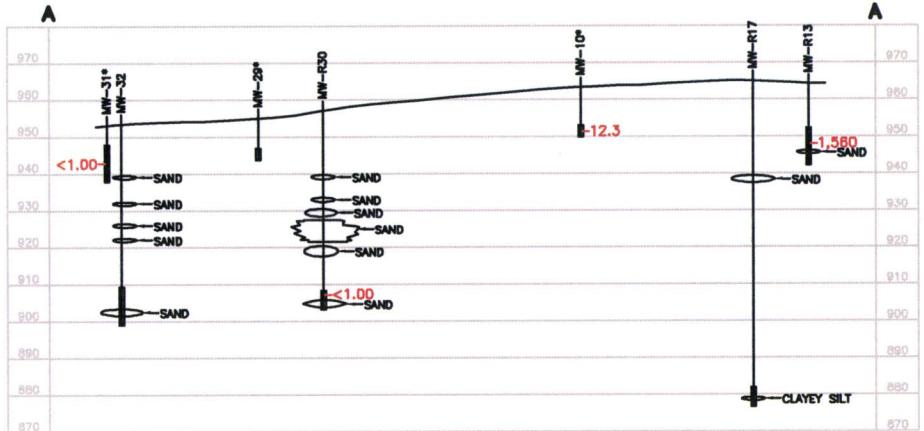
**FIGURE 17**  
**CROSS SECTION MAP**  
**SAUER-DANFOSS FACILITY**  
**AMES, IOWA**

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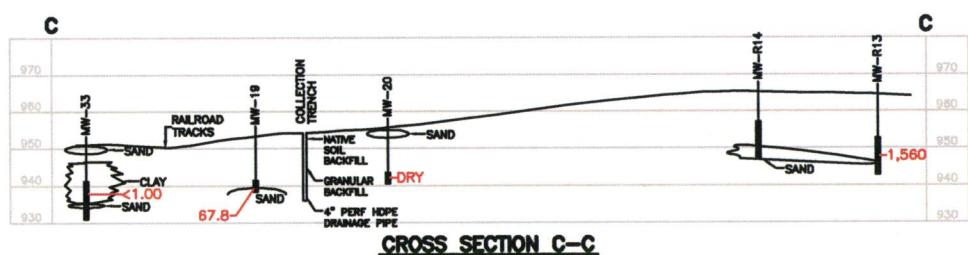
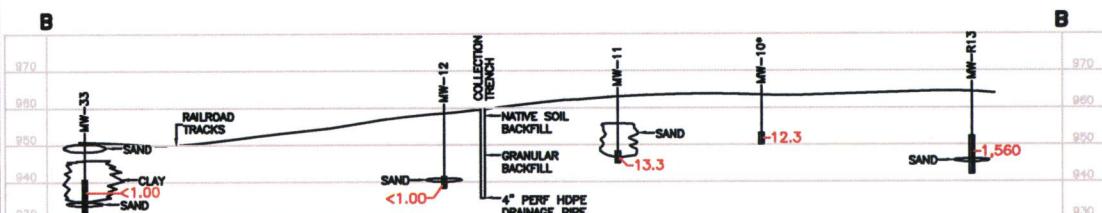


### LEGEND

- \* GEOLOGIC PROFILE UNKNOWN
- <1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 17**  
**HYDROGEOLOGIC PROFILE**  
**1,1-DICHLOROETHANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

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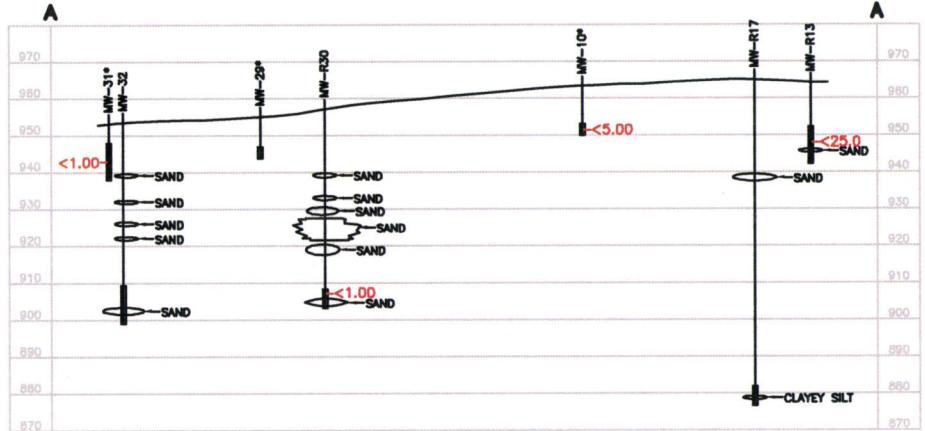
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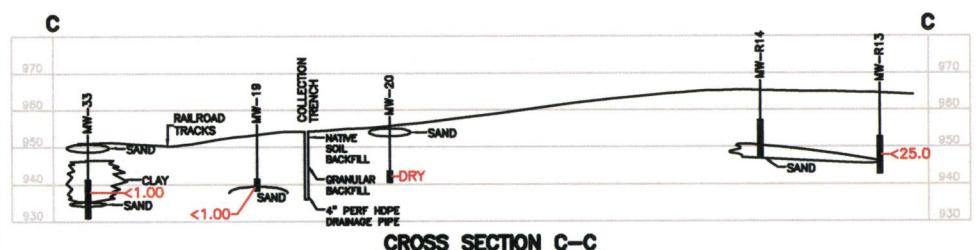
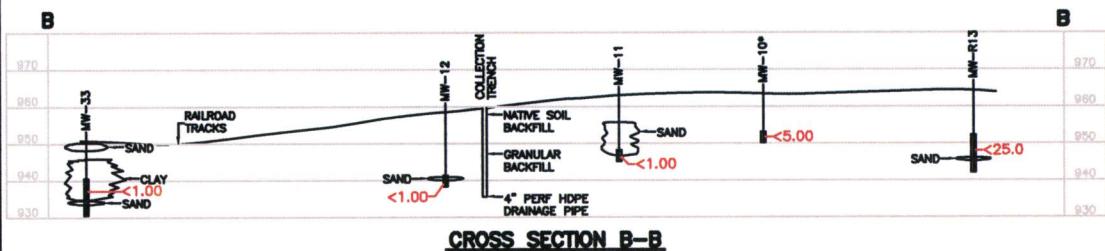


### LEGEND

- \* GEOLOGIC PROFILE UNKNOWN
- <1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 18**  
**HYDROGEOLOGIC PROFILE**  
**1,2-DICHLOROETHANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

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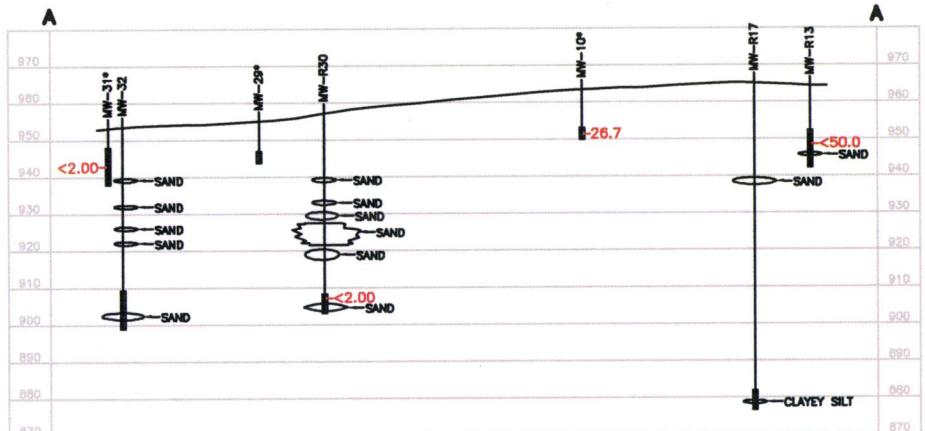
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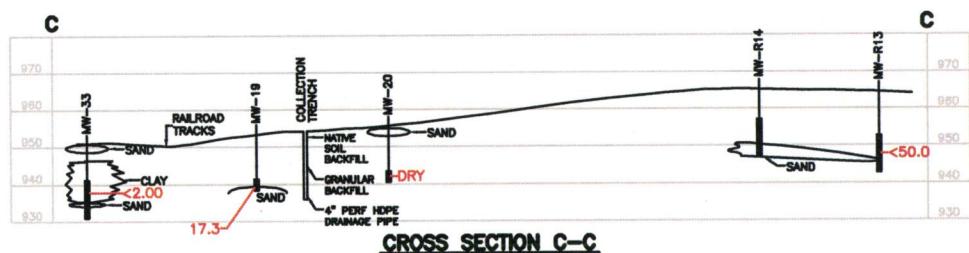
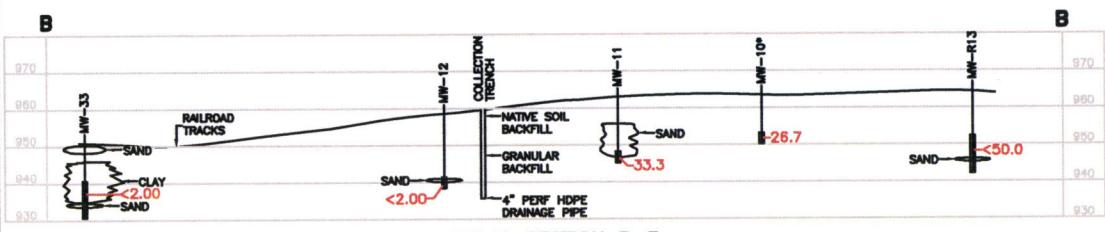
### LEGEND

\* GEOLOGIC PROFILE UNKNOWN

<1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 19**  
**HYDROGEOLOGIC PROFILE**  
**1,1-DICHLOROETHENE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

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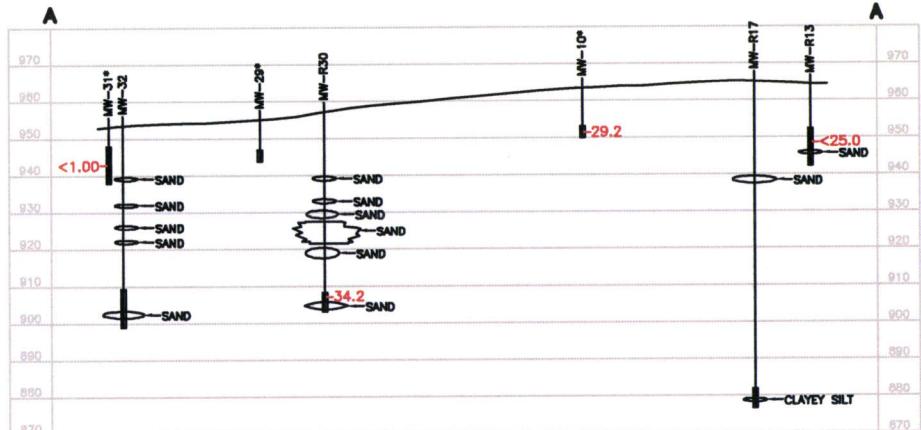
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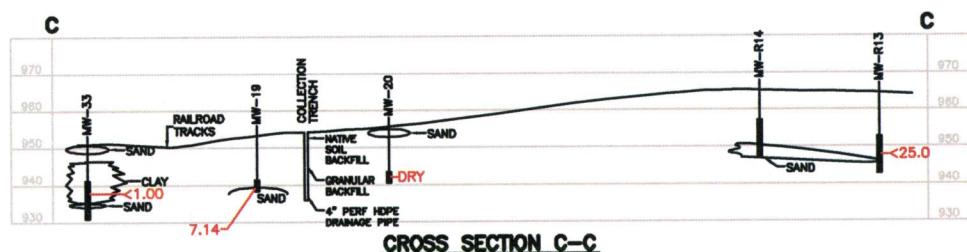
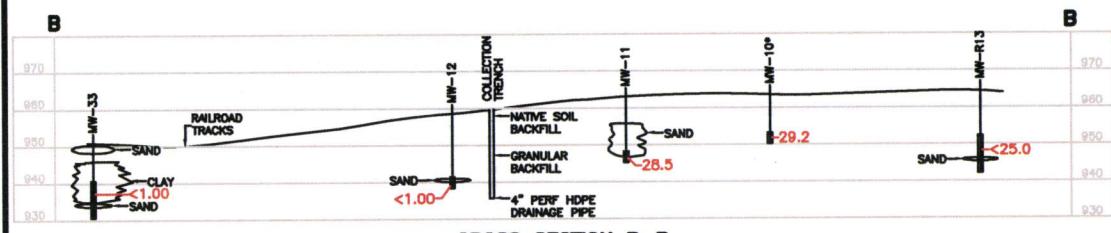
### LEGEND

\* GEOLOGIC PROFILE UNKNOWN

<1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 20**  
**HYDROGEOLOGIC PROFILE**  
**CIS-1,2-DICHLOROETHENE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

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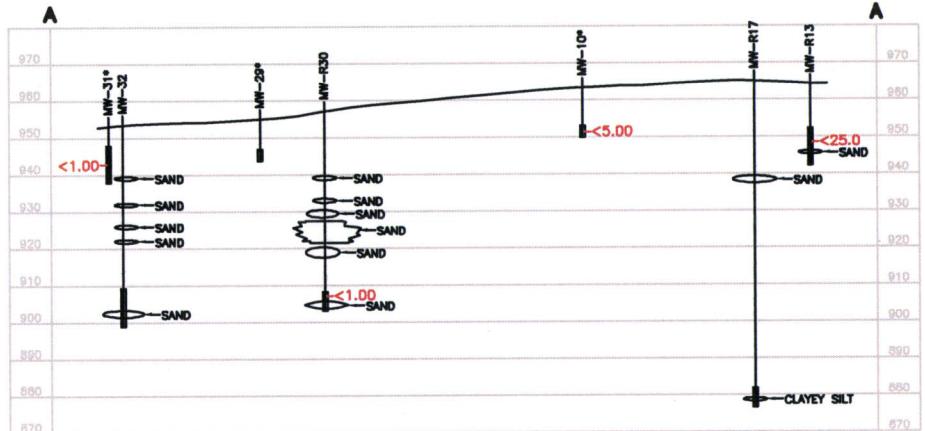
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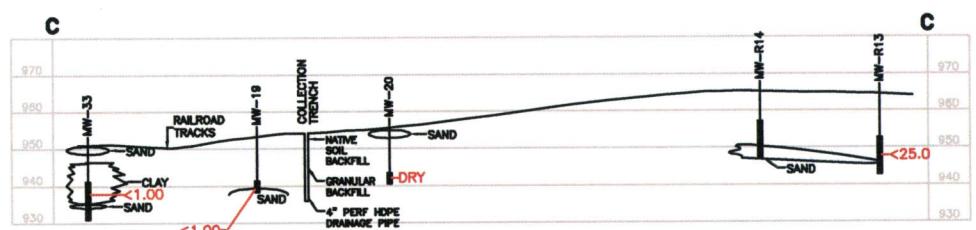
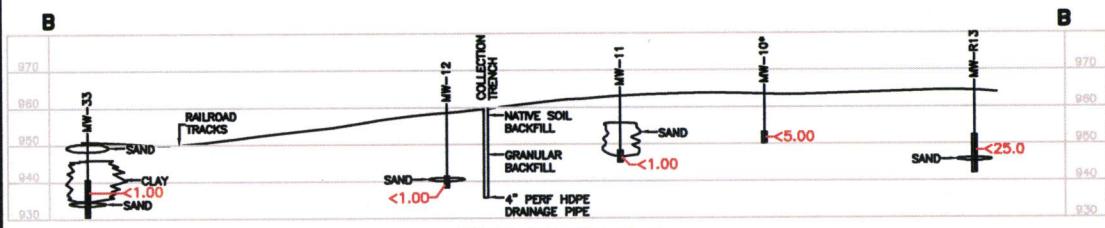


### LEGEND

- \* GEOLOGIC PROFILE UNKNOWN
- <1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 21**  
**HYDROGEOLOGIC PROFILE**  
**TRANS-1,2-DICHLOROETHENE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

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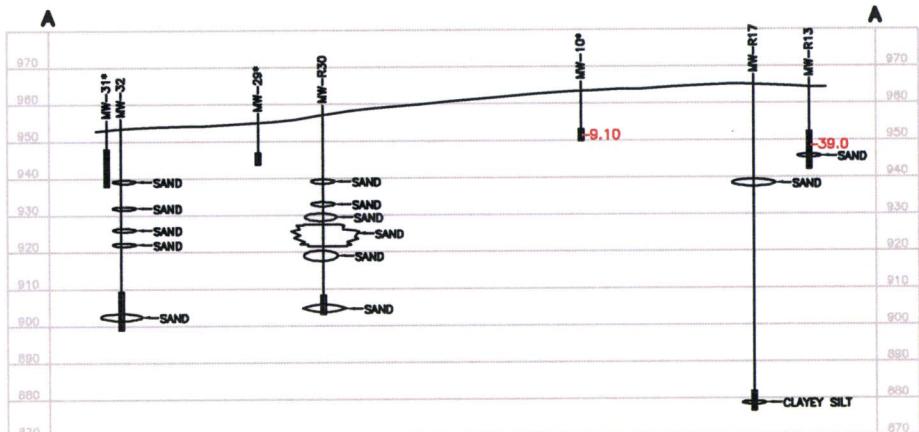
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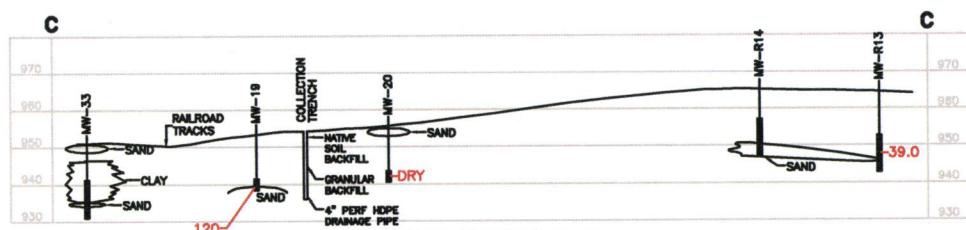
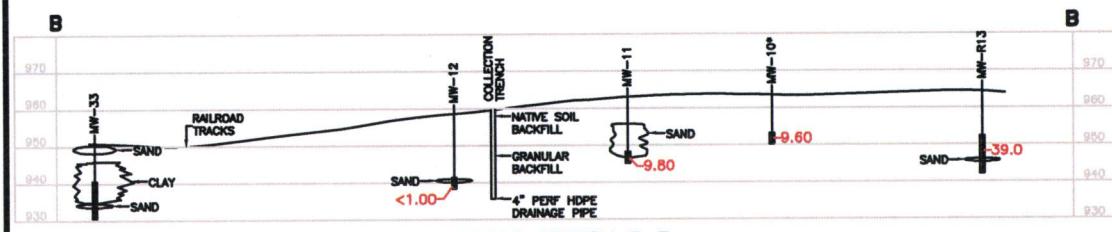


### LEGEND

\* GEOLOGIC PROFILE UNKNOWN  
<1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 22**  
**HYDROGEOLOGIC PROFILE**  
**1,4-DIOXANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

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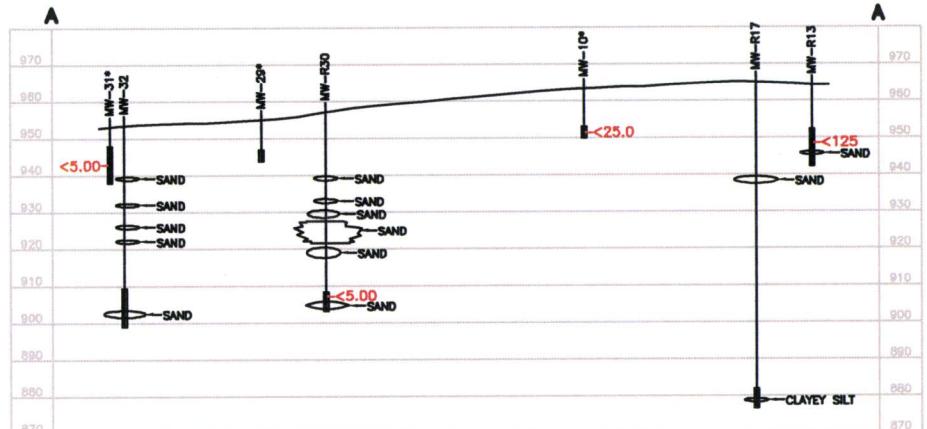
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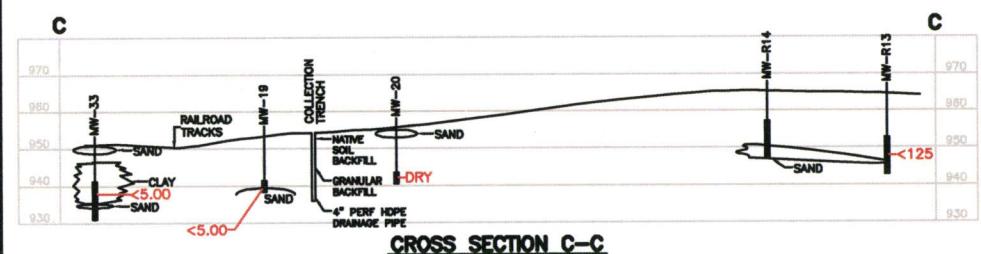
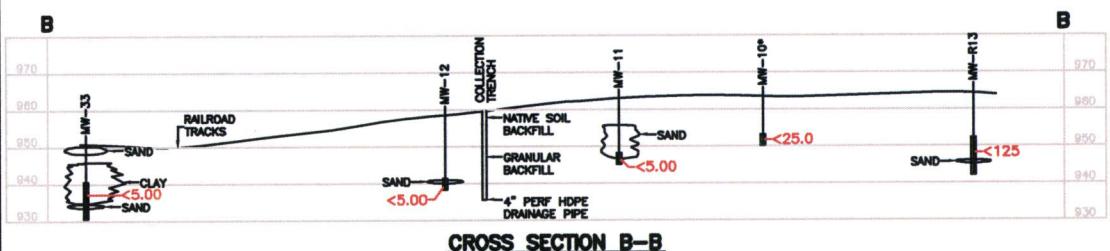


### LEGEND

\* GEOLOGIC PROFILE UNKNOWN  
<1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 23**  
**HYDROGEOLOGIC PROFILE**  
**METHYLENE CHLORIDE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

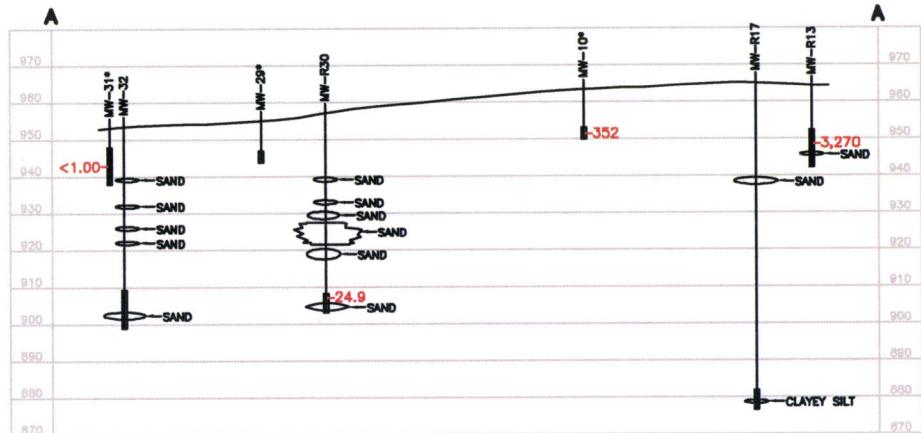
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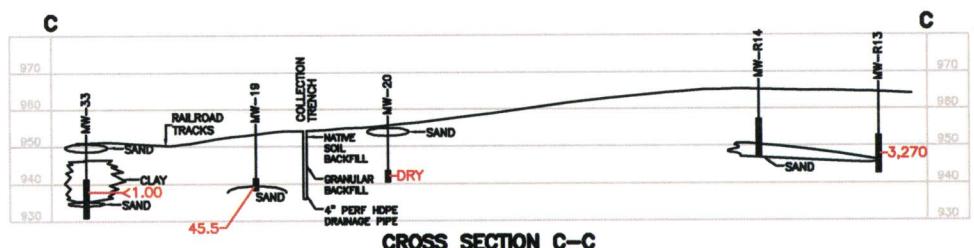
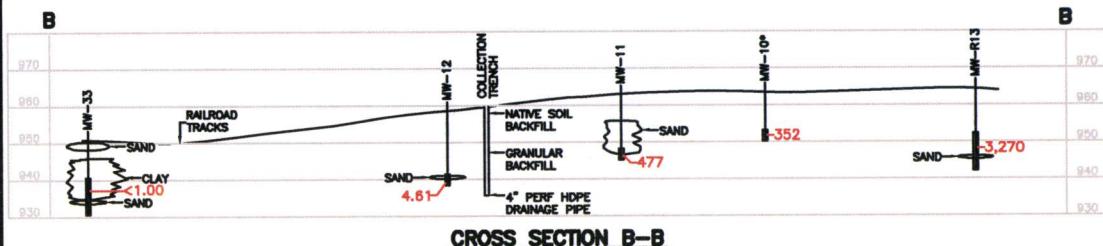


### LEGEND

- \* GEOLOGIC PROFILE UNKNOWN
- <1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 24**  
HYDROGEOLOGIC PROFILE  
TETRACHLOROETHENE CONCENTRATIONS  
OCTOBER 16–17, 2012  
SAUER–DANFOSS FACILITY  
AMES, IOWA

3/18/13

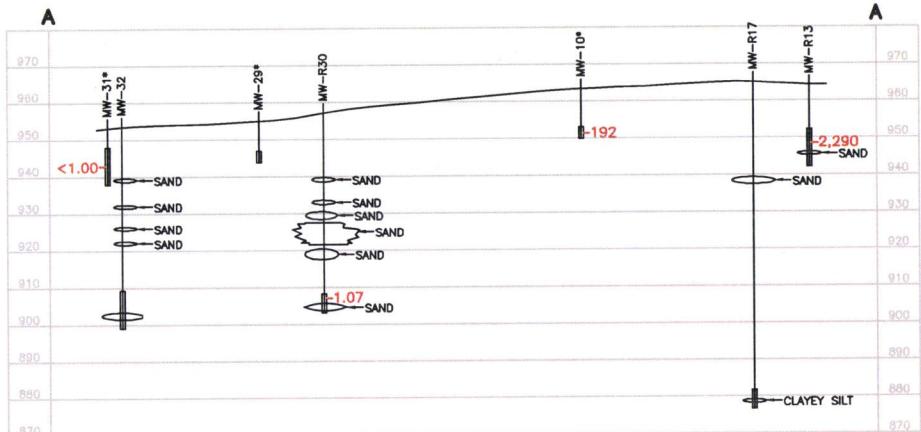
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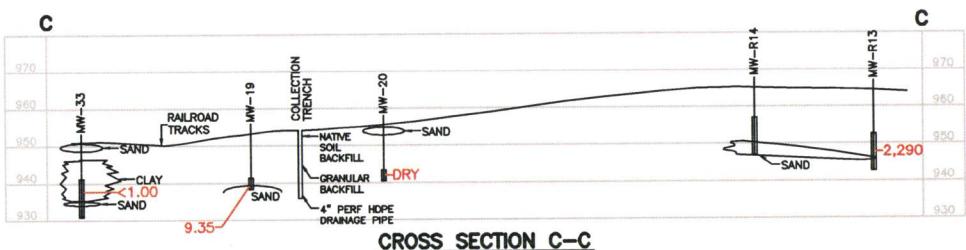
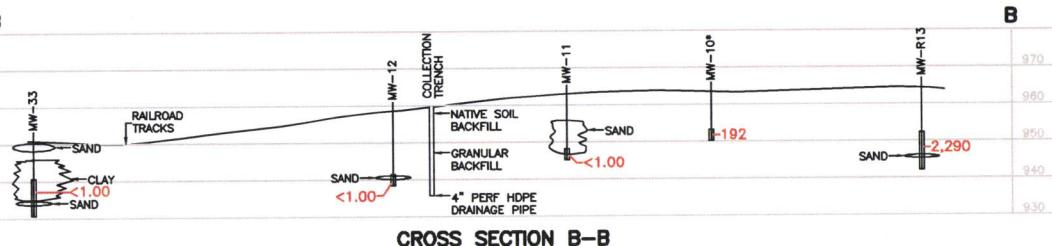


### LEGEND

\* GEOLOGIC PROFILE UNKNOWN  
 <1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
 VERT. 1" = 50'



**FIGURE 25**  
**HYDROGEOLOGIC PROFILE**  
**1,1,1-TRICHLOROETHANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

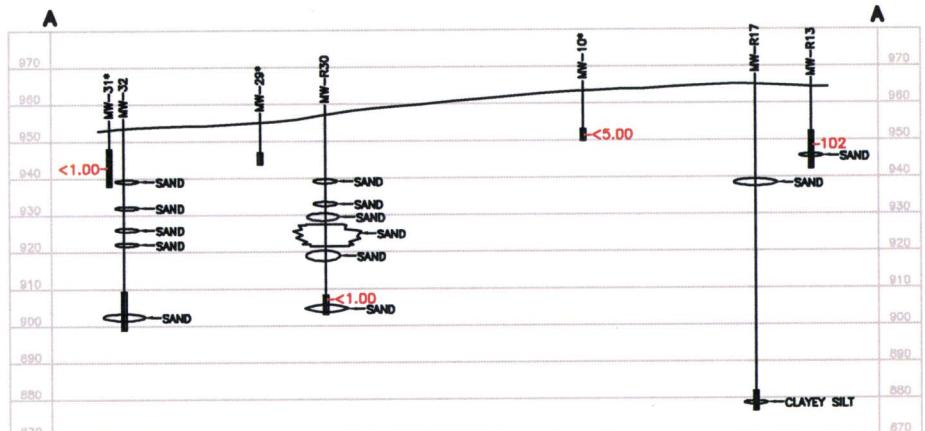
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IOWA

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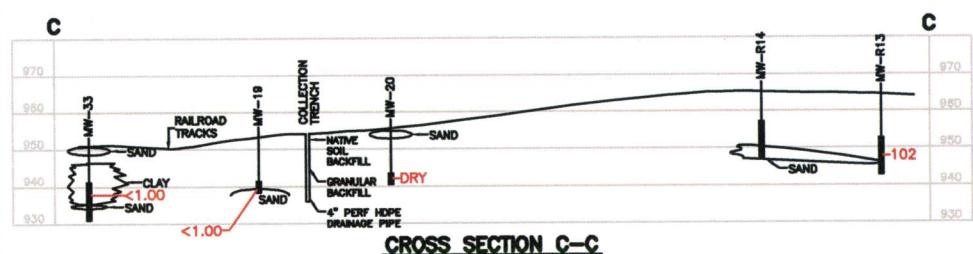
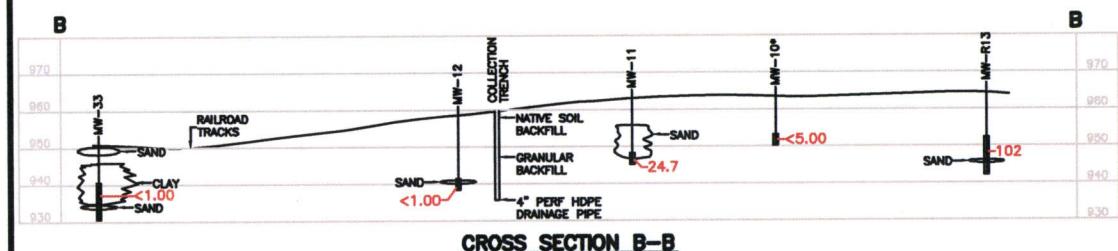
### LEGEND

\* GEOLOGIC PROFILE UNKNOWN

<1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 26**  
**HYDROGEOLOGIC PROFILE**  
**1,1,2-TRICHLOROETHANE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

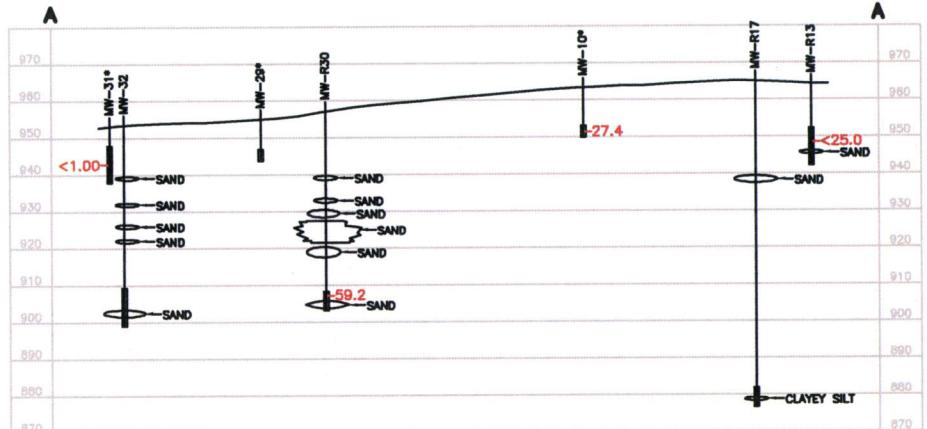
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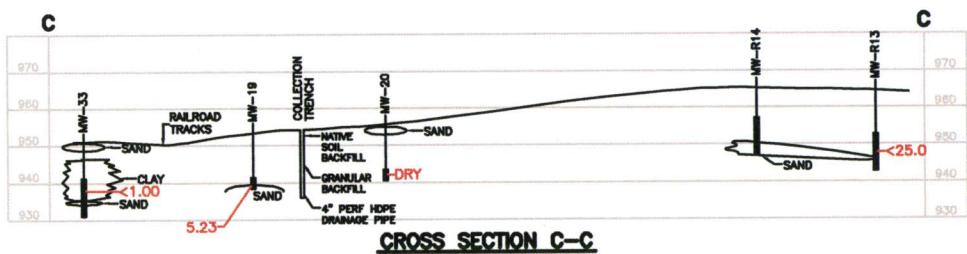
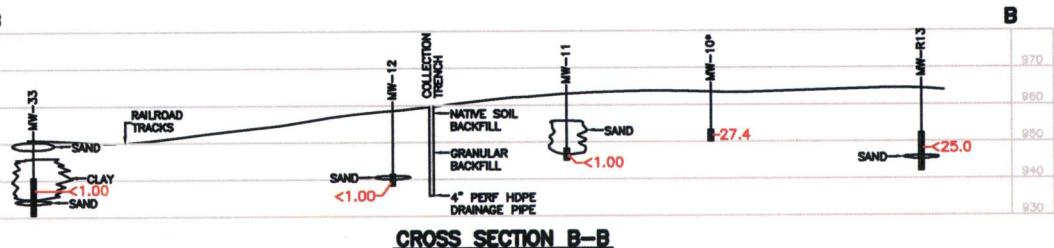


### LEGEND

\* GEOLOGIC PROFILE UNKNOWN  
 <1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
 VERT. 1" = 50'



**FIGURE 27**  
**HYDROGEOLOGIC PROFILE**  
**TRICHLOROETHENE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

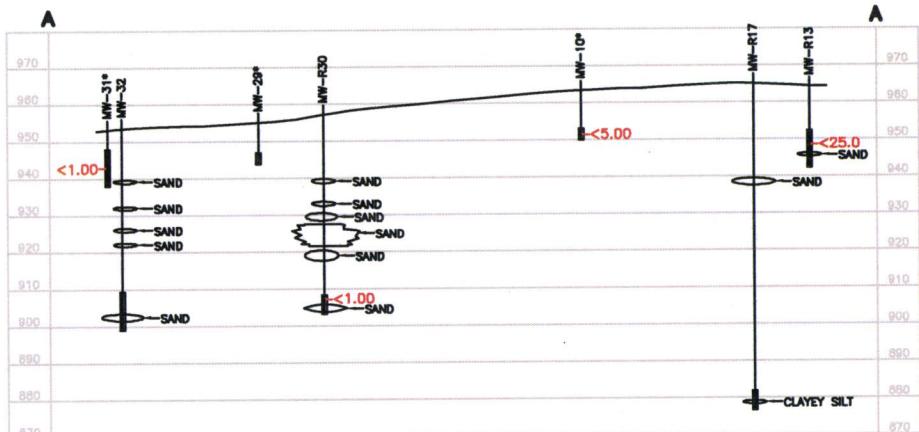
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ENGINEERING & ENVIRONMENTAL  
ILLINOIS DESIGN FIRM NO. 184-003625

ILLINOIS

IOWA

WISCONSIN



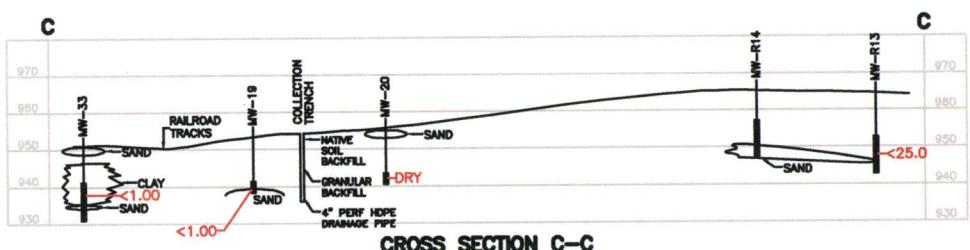
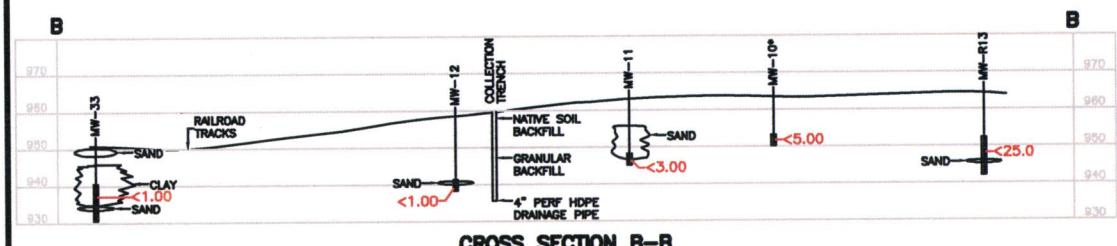
### LEGEND

\* GEOLOGIC PROFILE UNKNOWN

<1.00 CONCENTRATION IN ug/L

### SCALE

HORZ. 1" = 200'  
VERT. 1" = 50'



**FIGURE 28**  
**HYDROGEOLOGIC PROFILE**  
**VINYL CHLORIDE CONCENTRATIONS**  
**OCTOBER 16–17, 2012**  
**SAUER–DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

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ILLINOIS DESIGN FIRM NO. 184-003625

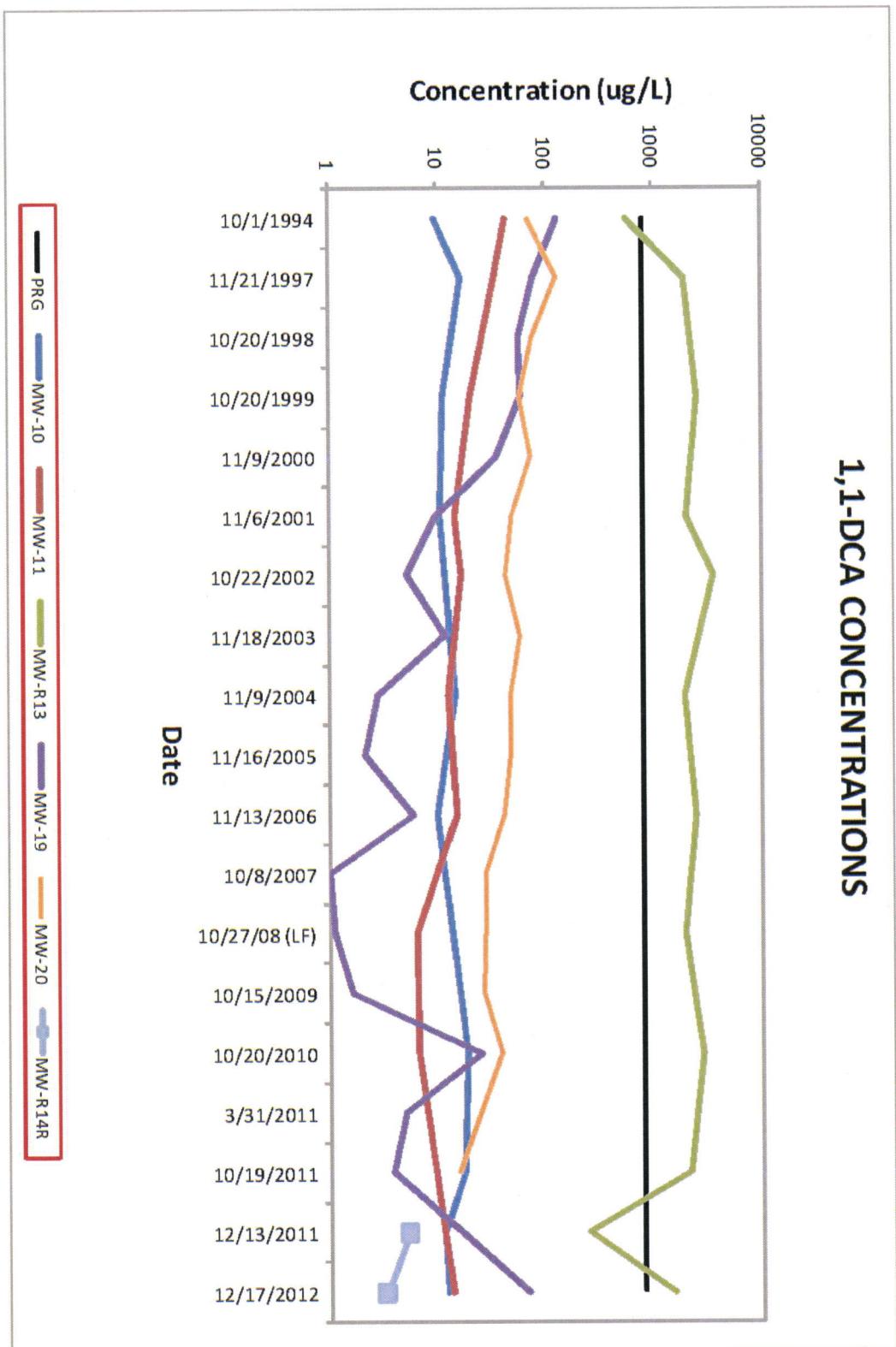
ILLINOIS

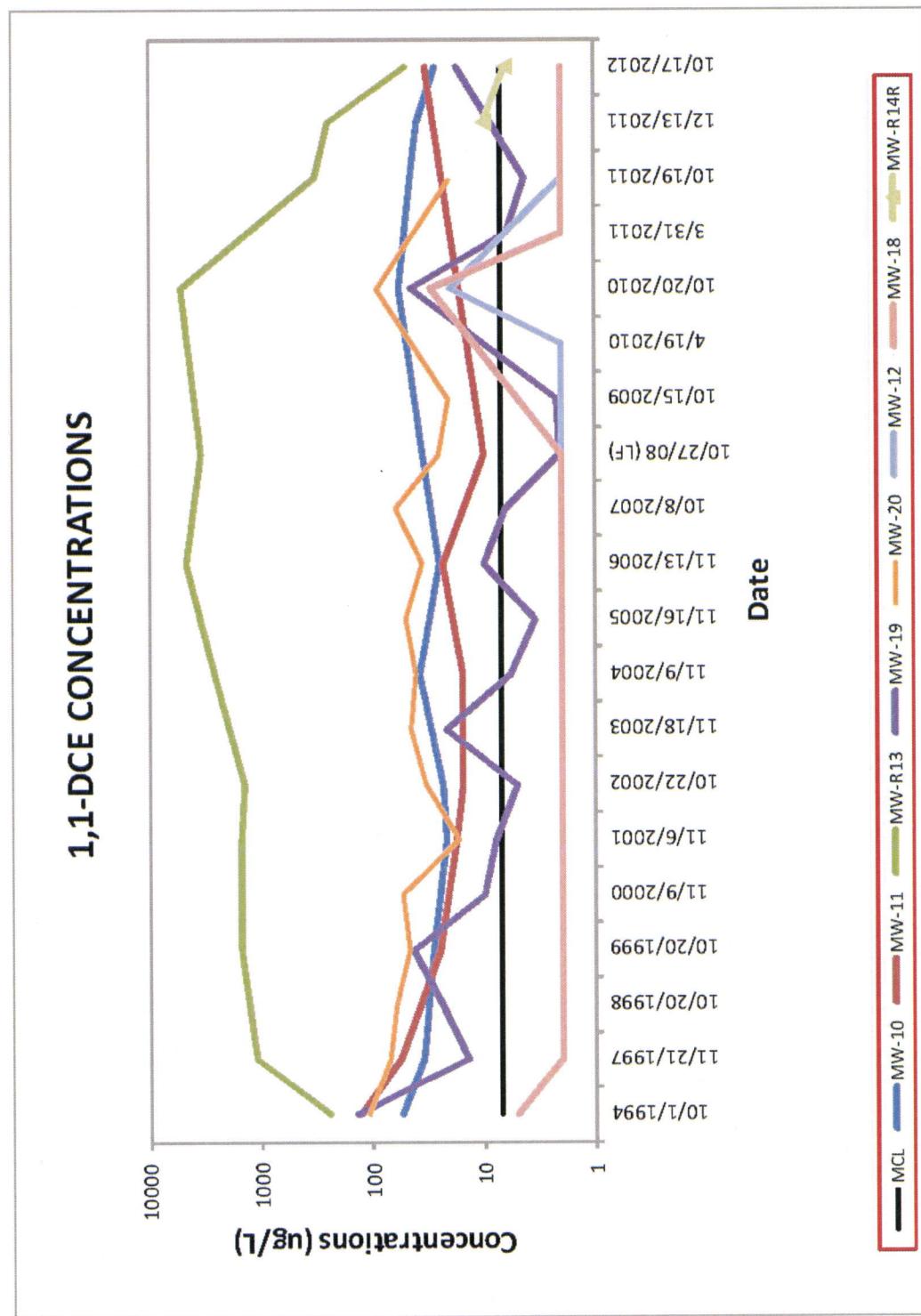
IOWA

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3/18/13

## 1,1-DCA CONCENTRATIONS SAUER-DANFOSS FACILITY AMES, IOWA





**FIGURE 30**  
**1,1-DCE CONCENTRATIONS**  
**SAUER-DANFOSS FACILITY**  
**AMES, IOWA**

3/18/13

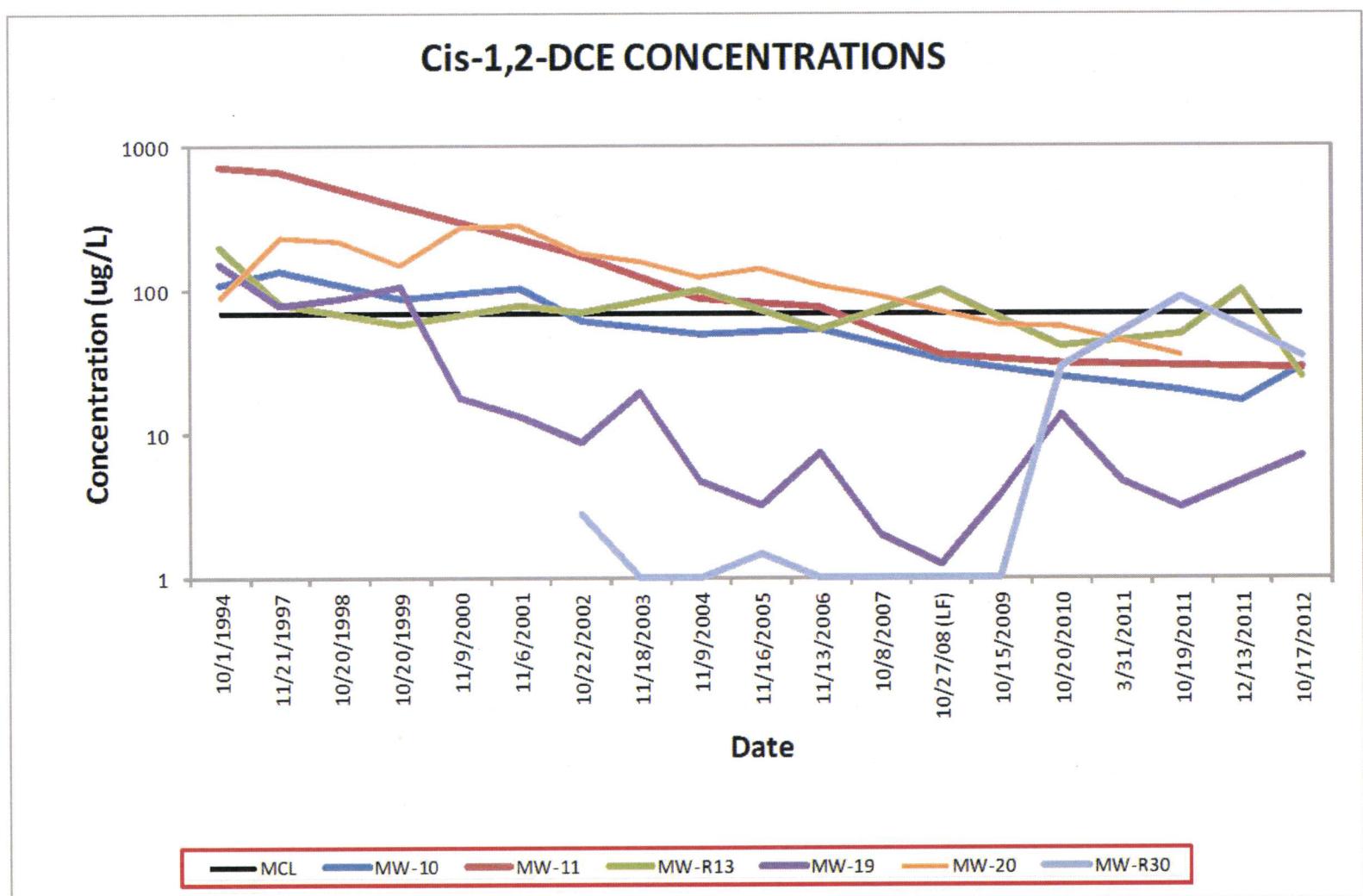
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ILLINOIS IOWA WISCONSIN

C:\Users\bfehr\appdata\local\temp\AcPublish\_420\13-233 Base.dwg, 31

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**FIGURE 31**  
**CIS-1,2-DCE CONCENTRATIONS**  
**SAUER-DANFOSS FACILITY**  
**AMES, IOWA**

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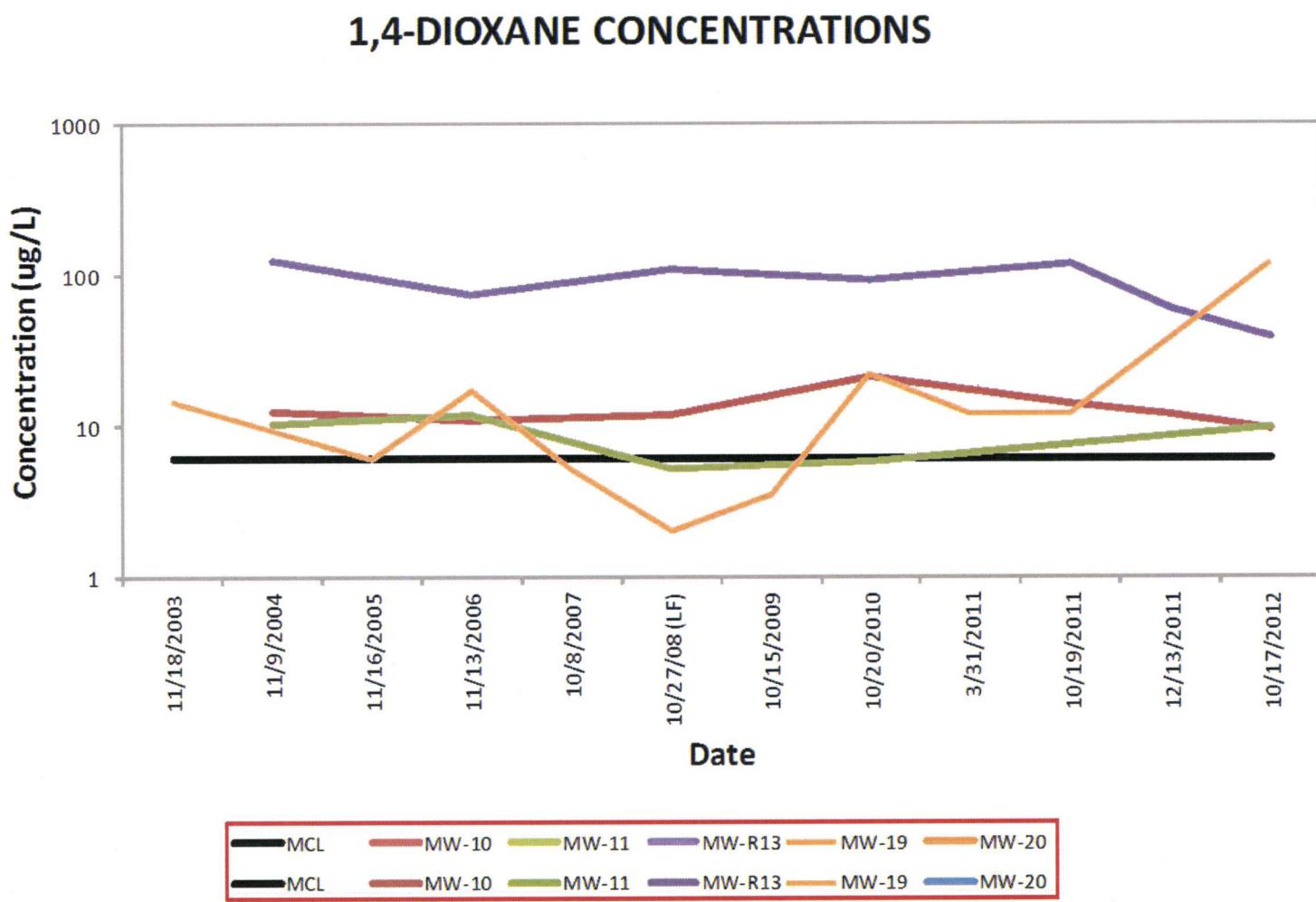
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**FIGURE 32**  
**1,4-DIOXANE CONCENTRATIONS**  
**SAUER-DANFOSS FACILITY**  
**AMES, IOWA**

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## METHYLENE CHLORIDE CONCENTRATIONS

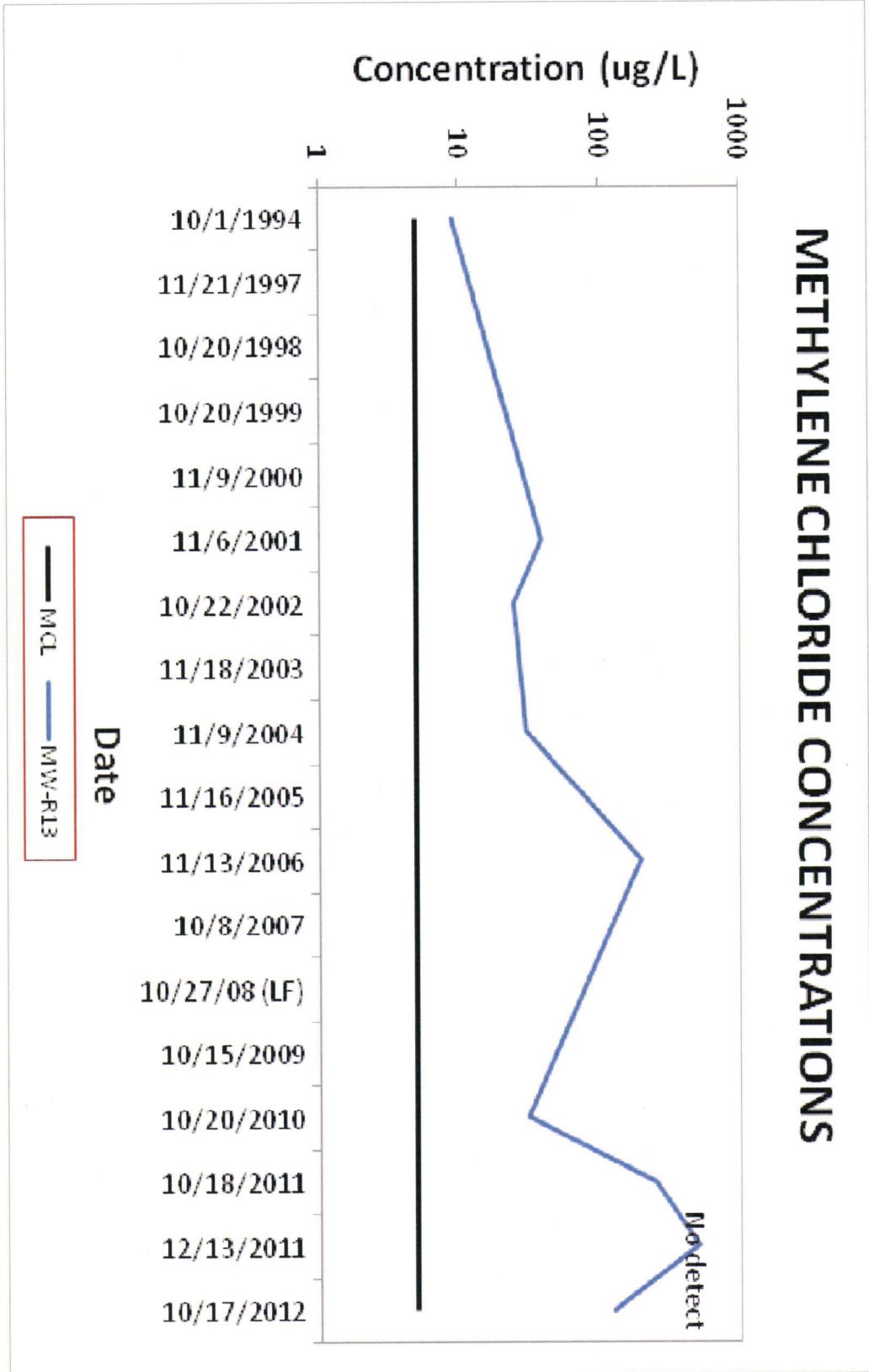


FIGURE 33

METHYLENE CHLORIDE CONCENTRATIONS  
SAUER-DANFOSS FACILITY

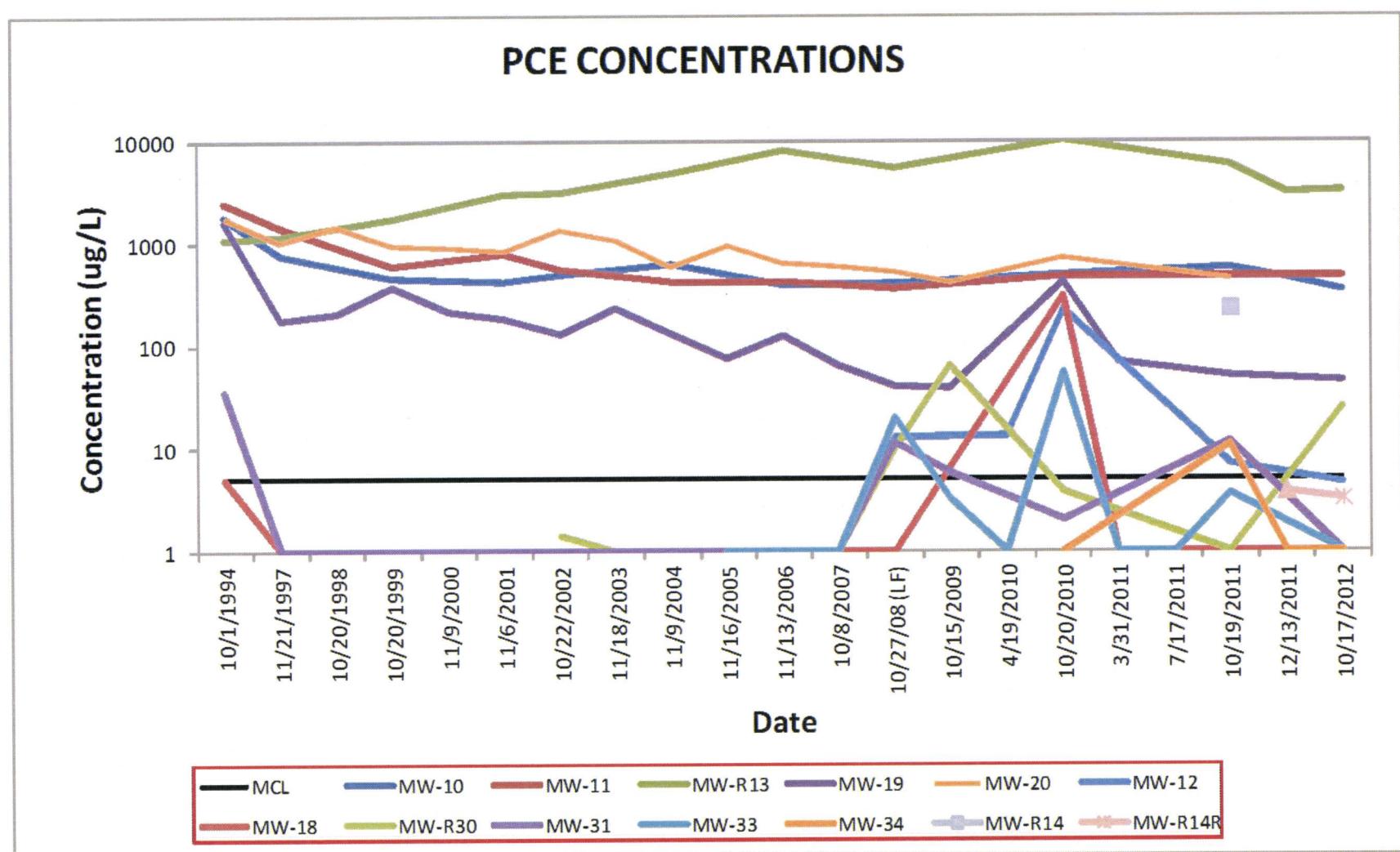
AMES, IOWA

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ILLINOIS DESIGN FIRM NO. 104-000922

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IOWA  
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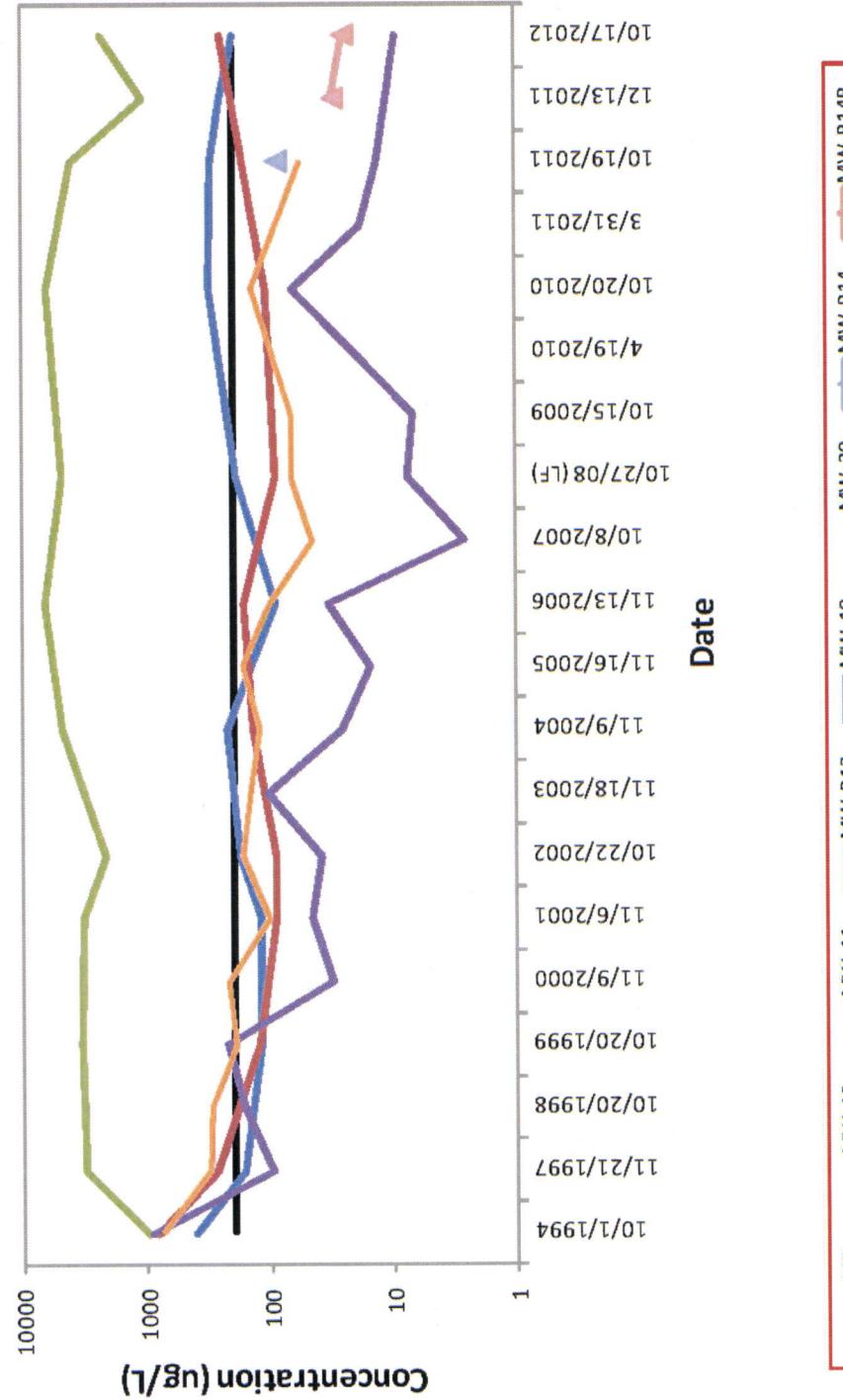
3/18/13



**FIGURE 34**  
PCE CONCENTRATIONS  
SAUER-DANFOSS FACILITY  
AMES, IOWA

3/18/13

## 1,1,1-TCA CONCENTRATIONS



**FIGURE 35**  
1,1,1-TCA CONCENTRATIONS  
SAUER-DANFOSS FACILITY  
AMES, IOWA

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ENGINEERING & ENVIRONMENTAL  
PLANNING DESIGN FIRM NO. 184-0432525

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## 1,1,2-TCA CONCENTRATIONS

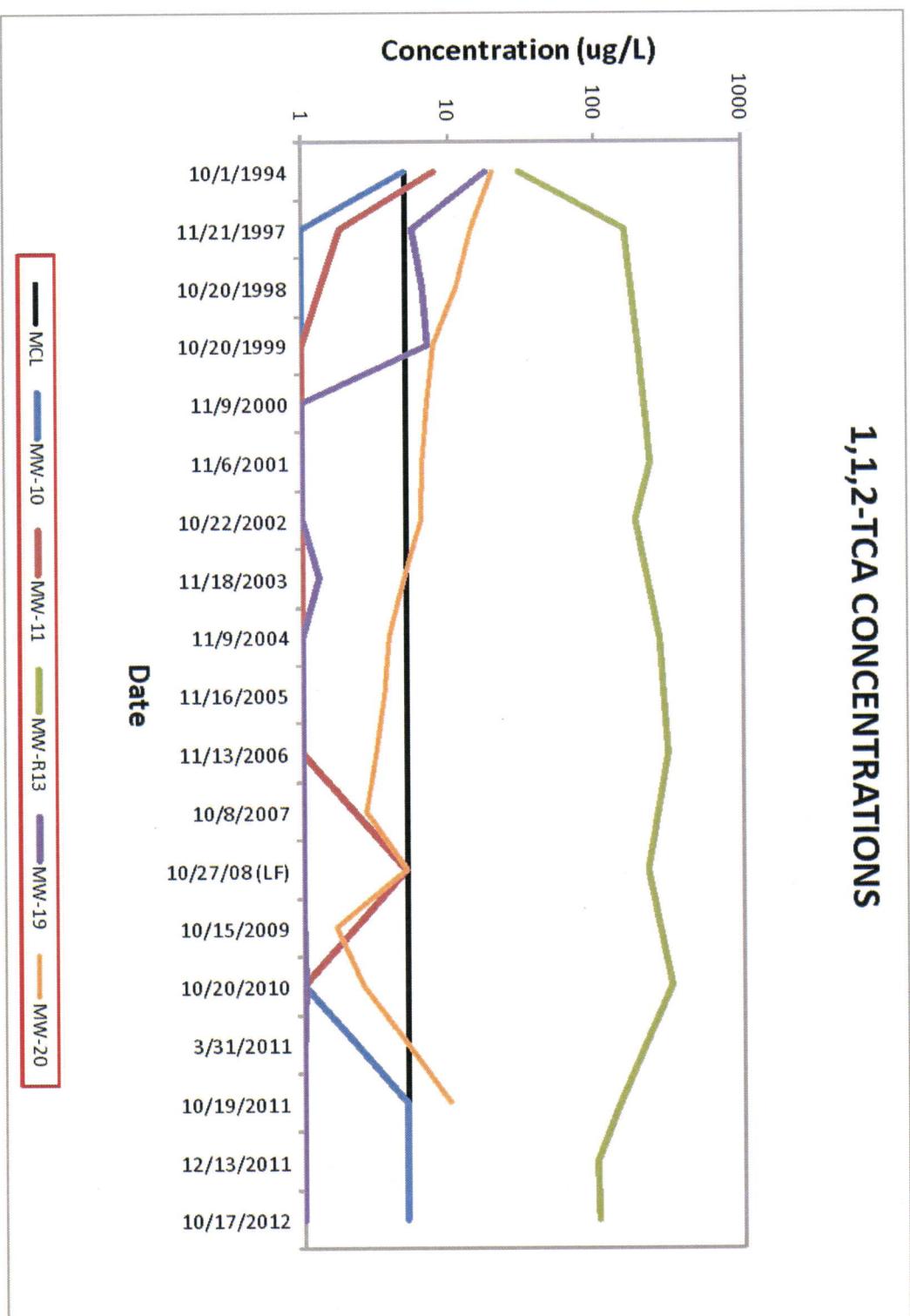


FIGURE 36

1,1,2-TCA CONCENTRATIONS  
SAUER-DANFOSS FACILITY  
AMES, IOWA

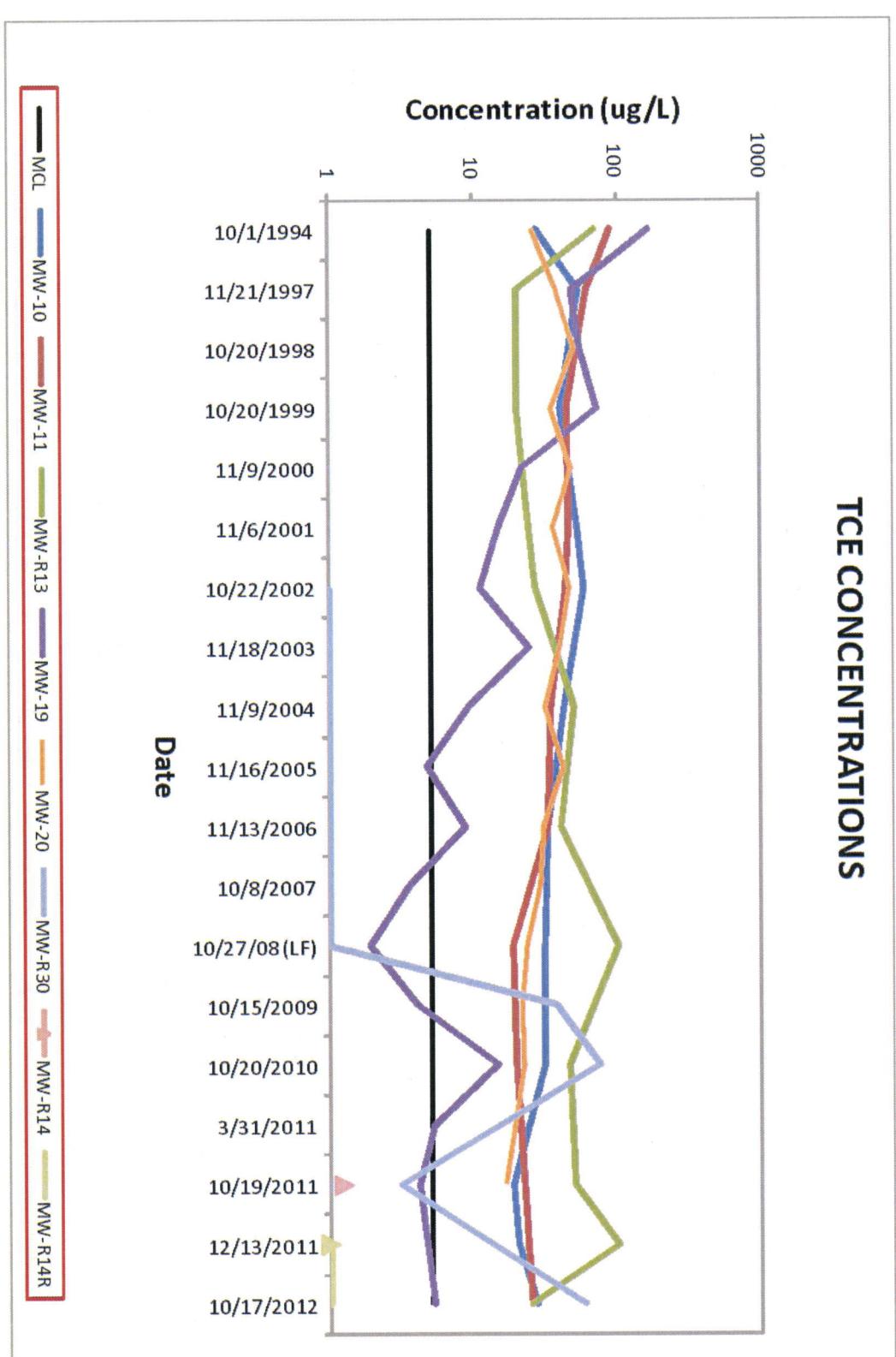
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ILLINOIS DESIGN FIRM NO. 104-0039225

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IOWA  
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## TCE CONCENTRATIONS



**FIGURE 37**

TCE CONCENTRATIONS  
SAUER-DANFOSS FACILITY  
AMES, IOWA

**FEHR GRAHAM**

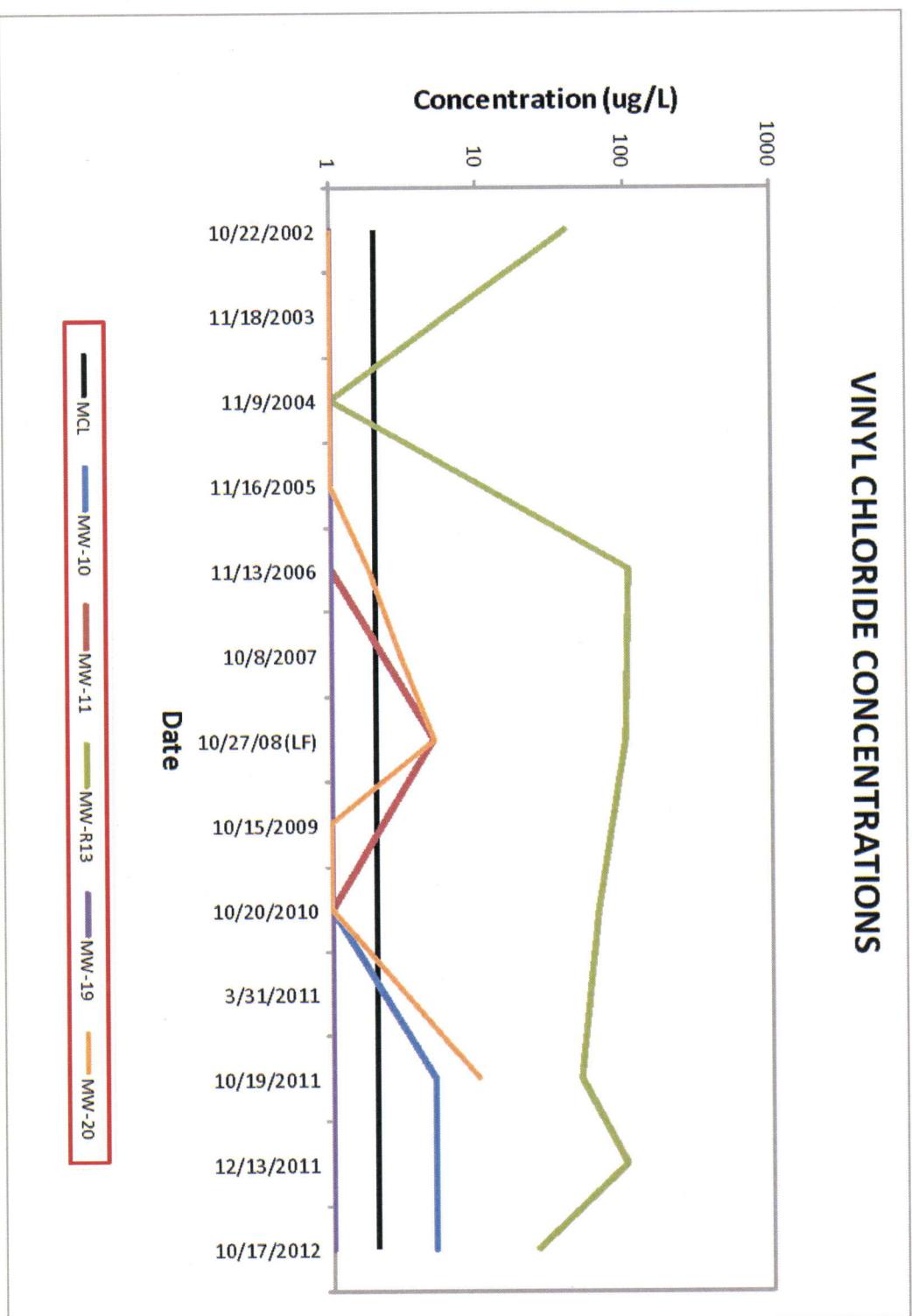
ENGINEERING & ENVIRONMENTAL

ILLINOIS DIVISION FIRM NO. 194-003922

ILLINOIS  
IOWA  
WISCONSIN

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## VINYL CHLORIDE CONCENTRATIONS



**FIGURE 38**

VINYL CHLORIDE CONCENTRATIONS  
SAUER-DANFOSS FACILITY  
AMES, IOWA

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ILLINOIS DIVISION FIRM NO. 104-0032925

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## **ATTACHMENTS**

**ATTACHMENT 1**

**2012 Semiannual Remedial System Maintenance Summaries**

**SAUER-DANFOSS (AMES, IA)**  
**SEMIANNUAL REMEDIAL SYSTEM MAINTENANCE**

Date: November 15, 2012

Participants: Jason Miller of Fehr-Graham

Brian Christiansen of Mechanical Comfort, Inc. (MCI)

Tools: 30' tape measure with water level detection tape, 25' level rod

Purpose: To ensure proper operation of groundwater remediation system

**Maintenance activities summary:**

- 1) Confirm operation of the standpipe level sensor in the operating mode with MCI:
  - Close valve on standpipe
  - Allow standpipe to fill with water

*Pump should be deactivated once the water level reaches the level sensor*

Successful (yes/no)? Comments:

Stand pipe dripping when valve is closed during shutdown, Travis Reilly contacted plumber to fix.

- 2) Measure inside and outside temperatures with independent device to confirm temps displayed by computer controller with MCI.

- Independent device used: Fluke 87 RMS multimeter
- Measure inside air temperature – 72.2
- Document computer controller inside air temperature – 72.5
- Measure outside air temperature – 43.1 (actual outside) 43.5 (computer)
- Document computer controller outside air temperature

*Record temperatures. Comments:*

- 3) Measure water temperature with thermometer and compare to computer controller reading with MCI.

- Measure water temperature with thermometer – 57.0 (turned on valve by 10,000 gal tank and ran H<sub>2</sub>O)
- Document computer controller reading of water temperature – 55.9

*Record temperatures. Comments:*

4) Measure depth of transducer installation at sump (two person job):

- Pull out entire transducer and cable and lay out on ground
- Measure with tape measure from zip tie to bottom of transducer
- Inspect transducer and cable for excess sediment/sludge, damage, etc.
- Return transducer and cable to sump

*Measured distance from zip tie to bottom of transducer should be equal to the original installed depth of 19' 3"*

Measurement equal to original installation (yes/no)? Comments:

Yes -19' 3" measured → same as original – no evidence of excess sediment or damage on transducer

5) Calculate the sump water level from the bottom of the transducer (requires water level detection tape):

- Use the level rod to measure the depth of the water from the bottom of the sump in tenths of a foot (1) 10.15'
- Use the level rod to measure the depth of the sump to the top of the casing pipe in tenths of a foot (2) 22.3'
- Measure distance from top of the casing to the zip tie on the transducer cable in inches (3) 0.7'
- Record length of transducer cable to bottom of transducer from #4 above in inches (4)
- Add distance from top of casing to the zip tie (3) and length of transducer cable to bottom of transducer (4). Convert to tenths of a foot (5)
- Calculate the depth of the water above the bottom of the transducer (6):  
Water depth (1) -[Depth of sump (2) - Bottom of transducer to top of casing (5)]
- Record the corresponding reading of the depth of water above the bottom of the transducer displayed by the computer controller with MCI - 6.15'

*Measurement and reading should be equal*

Measurement and reading of sump water level equal (yes/no)? Was the computer controller recalibrated to correct for any difference? Comments:

Bottom of sump into water level = 7.2'

Bottom of sump to top of casing = 22.3'

Top of casing to zip tie = 7"

22.3 Calculated/measured = 6.45'

System = 6.15' (no adjustment)

6) Probe the sump for sediment.

- Use level rod to probe for sludge in the bottom of the sump
- Original measurement of sump depth in Jan-98 = 24.30'
- Incoming interception trench drainage pipe = 21.30'

*Report difference in sump depth due to sediment accumulation*

~2" sludge. Sump depth to top of casing = 22.3'

- 7) Document any maintenance or service required on the system that was identified during the maintenance check or at any other time. Confirm with Mechanical Comfort, Inc. and follow-up to ensure completion.

Standpipe was leaking when valve turned off – Travis Reilly from Sauer to call plumber.

O:\Sauer-Danfoss, Inc\Environmental Compliance\Ames, Iowa\Remediation Project\Semi-Annual Remedial System Maintenance 11-15-12.doc

**SAUER-DANFOSS (AMES, IA)**  
**SEMIANNUAL REMEDIAL SYSTEM MAINTENANCE**

Date: May 8, 2012

Participants: Jason Miller of Fehr-Graham

Brian Christiansen of Mechanical Comfort, Inc. (MCI)

Tools: 30' tape measure with water level detection tape, 25' level rod

Purpose: To ensure proper operation of groundwater remediation system

**Maintenance activities summary:**

- 1) Confirm operation of the standpipe level sensor in the operating mode with MCI:
  - Close valve on standpipe
  - Allow standpipe to fill with water

*Pump should be deactivated once the water level reaches the level sensor*

Successful (yes/no)? Comments:

No – MCI to change either the relay or whole board.

Pipe dripping, Travis Reilly contacted plumber to fix.

- 2) Measure inside and outside temperatures with independent device to confirm temps displayed by computer controller with MCI.

- Independent device used: Fluke 87 RMS multimeter
- Measure inside air temperature – 72.3
- Document computer controller inside air temperature – 74
- Measure outside air temperature – 69.9 (actual outside) 70.1 (computer)
- Document computer controller outside air temperature

*Record temperatures. Comments:*

- 3) Measure water temperature with thermometer and compare to computer controller reading with MCI.

- Measure water temperature with thermometer – 50.5 (turned on valve by 10,000 gal tank and ran H<sub>2</sub>O)
- Document computer controller reading of water temperature – 49.8

*Record temperatures. Comments:*

- 4) Measure depth of transducer installation at sump (two person job):
- Pull out entire transducer and cable and lay out on ground
  - Measure with tape measure from zip tie to bottom of transducer
  - Inspect transducer and cable for excess sediment/sludge, damage, etc.
  - Return transducer and cable to sump
- Measured distance from zip tie to bottom of transducer should be equal to the original installed depth of 19' 3"*

Measurement equal to original installation (yes/no)? Comments:

Yes -19' 3" measured → same as original – no evidence of excess sediment or damage on transducer

- 5) Calculate the sump water level from the bottom of the transducer (requires water level detection tape):
- Use the level rod to measure the depth of the water from the bottom of the sump in tenths of a foot (1) 7.2'
  - Use the level rod to measure the depth of the sump to the top of the casing pipe in tenths of a foot (2) 22.3'
  - Measure distance from top of the casing to the zip tie on the transducer cable in inches (3) 0.7'
  - Record length of transducer cable to bottom of transducer from #4 above in inches (4)
  - Add distance from top of casing to the zip tie (3) and length of transducer cable to bottom of transducer (4). Convert to tenths of a foot (5)
  - Calculate the depth of the water above the bottom of the transducer (6):  
Water depth (1) – [Depth of sump (2) – Bottom of transducer to top of casing (5)]
  - Record the corresponding reading of the depth of water above the bottom of the transducer displayed by the computer controller with MCI - 5.95'

*Measurement and reading should be equal*

Measurement and reading of sump water level equal (yes/no)? Was the computer controller recalibrated to correct for any difference? Comments:

Bottom of sump into water level = 7.2'

Bottom of sump to top of casing = 22.3'

Top of casing to zip tie = 7"

22.3 Calculated/measured = 4.8'

System = 5.7' (adjusted system 0.9' down)

- 6) Probe the sump for sediment.

- Use level rod to probe for sludge in the bottom of the sump
- Original measurement of sump depth in Jan-98 = 24.30'
- Incoming interception trench drainage pipe = 21.30'

*Report difference in sump depth due to sediment accumulation*

~2" sludge. Sump depth to top of casing = 22.3'

- 7) Document any maintenance or service required on the system that was identified during the maintenance check or at any other time. Confirm with Mechanical Comfort, Inc. and follow-up to ensure completion.

Standpipe was leaking when valve turned off – Travis Reilly from Sauer to call plumber. Relay or circuit board to be replaced by MCI, high level alarm did not activate.

I:\Environmental\Client Folders\Sauer Danfoss\Ames, Iowa\Remediation Project\Semi-Annual Remedial System Maintenance 5-8-12.doc

**ATTACHMENT 2**

**2012 Quarterly Monitoring Reports**



**FEHR-GRAHAM & ASSOCIATES**  
Engineering & Science Consultants

SOLUTIONS SINCE 1973

221 E Main St Suite 200  
Freeport IL 61032  
ph 815 235 7643  
fax 815 235 4632  
[www.fehr-graham.com](http://www.fehr-graham.com)

## FILE COPY

UPS Overnight Tracking Number: 1Z 651 395 01 5056 6188

April 3, 2012

Mr. Gary Erickson  
Sauer-Danfoss (US) Company  
2800 East 13<sup>th</sup> Street  
Ames, IA 50010

### RE: Non-Domestic Waste Pretreatment Program Quarterly Report –1st Quarter 2012

Dear Mr. Erickson:

Enclosed please find three copies of the above-referenced documents. Please review for completeness and accuracy. If satisfactory, sign and date where indicated. The original set, along with the enclosed cover letter, should be forwarded to the Water and Pollution Control Department for the City of Ames. For your convenience, certified mailing labels are enclosed. Please retain two additional copies and I will file next time I am on-site.

**A hardcopy of the entire report must be received by the City of Ames no later than April 10, 2012.**

If you have any questions regarding the enclosed documents, please do not hesitate to contact this office.

Sincerely,

Jason Miller, CHMM  
Environmental Specialist

JAM:mll  
K:\Sec\SEC 2012\12-313\JAM 12-313 - 1st Qtr Wastewater to City of Ames.doc  
Enclosures



FEHR-GRAHAM & ASSOCIATES  
Engineering & Science Consultants

SOLUTIONS SINCE 1973

CERTIFIED MAIL NUMBER: 7011 3500 0000 1535 5967  
RETURN RECEIPT REQUESTED

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Freeport IL 61032  
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[www.fehr-graham.com](http://www.fehr-graham.com)

FILE COPY

April 5, 2012

City of Ames, Iowa  
Water and Pollution Control Department  
300 East Fifth Street, Building 1  
Ames, IA 50010

RE: Non-Domestic Waste Pretreatment Program Quarterly Report – 1st Quarter 2012  
Sauer-Danfoss (US) Company  
2800 East 13<sup>th</sup> Street  
Ames, IA 50010  
Facility Permit No. 6593-9

Dear Sir or Madam:

Enclosed please find the Non-Domestic Waste Pretreatment Program Quarterly Report for wastewater discharge from the above-referenced facility for the 1st quarter of 2012. Also enclosed are copies of the analytical reports from Keystone Labs and Test America for the analysis of wastewater and groundwater remediation respectively and a summary of monthly flow in gals/month from the groundwater remediation project.

Should you have any questions regarding these documents, please do not hesitate to contact this office.

Sincerely,

Jason Miller, CHMM  
Environmental Specialist

JAM:mll  
K:\Sec\SEC 2012\12-313\JAM 12-313 - 1st Qtrr Wastewater to City of Ames.doc  
Enclosures

cc: Sauer-Danfoss (with enclosure)

Non-Domestic Waste Pretreatment Program

Quarterly Report

(Non-Significant, Non-Domestic Contributor)

1st Quarter 2012

Reporting Period: 1/1/2012 to 3/31/2012

Submit results on or before the 10th of the month following the end of the quarter

Facility: Sauer-Danfoss

Permit No: 6593-9

Facility Contact: Gary Erickson

Facility Phone No: 515-239-6000

Sampling Location: Front Parking Lot North Manhole (Wastewater)/On-Site Wastewater Treatment

Sample Port (GW Remediation)

Sample Type: Grab & 24 Hour Composite

Sample Date: 2/22/12 (GW Remediation) / 2/7/12 (Wastewater)

Analyte	Permit Limit Mg/L	Sample Results Mg/L
Facility	Sauer Danfoss 2800 East 13th	Sauer Danfoss 2800 East 13th
Flow	Gals/Day	24,250
pH	6-10 pH	8.00
TSS	1,600	1,120
Cyanide	0.88	<0.007
Ammonia (NH3)	225	19.9
Total Kjeldahl Nitrogen (TKN)	280	128.0
Oil & Grease	300	134
CBOD 5	1,800	1,070
COD	2,700	<1000
Molybdenum	0.29	0.041
GW remediation		Max Expected Concentration ug/L
Flow (remediation)	Gals/Quart	305,226
Acetone	44	<10.0
1,1-Dichloroethane	370	4.48
1,1-Dichloroethene	170	5.21
cis- 1,2-Dichloroethene	490	29.7
Tetrachloroethene	1700	260
1,1,1-Trichloroethane	650	23.9
Trichloroethene	110	11.0
Total Xylenes	11	<3.0

Note: Please attach sample results from Laboratory

Process or Treatment Change: None

Additional Comments: Please see attached for Groundwater Remediation Flow Data.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed \_\_\_\_\_  
Authorized Representative

Date \_\_\_\_\_

Sauer-Danfoss  
Ames, IA  
Groundwater Remediation Flow Data

January 2012	86,055
February 2012	86,252
March 2012	132,919
Total flow (gals) 1st Quarter:	305,226
	3,391 gpd

# of days in Quarter =

90

# **Keystone Analytical Report**

**2/07/12**

## ANALYTICAL REPORT

February 16, 2012

Page 1 of 9

Work Order: 1B20316

Report To	Work Order Information
Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010	Date Received: 02/07/2012 2:20PM Collector: Phone: (515) 239-6539 PO Number: 4501784596

Project : Quarterly Waste Pretreatment

Project Number: Pretreatment

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1B20316-01	Front Parking Lot North Manhole			Matrix:Water		Collected:	02/07/12 08:40
CBOD (5 day)	1070 mg/L	4	IVB0185	SM 5210 B	JRP	02/08/12 7:00	
Cyanide, total	<0.007 mg/L	0.007	IVB0207	4500CN-E	DRB	02/08/12 8:43	
Chemical Oxygen Demand	<1000 mg/L	1000	IVB0206	EPA 410.4	SAI	02/08/12 16:24	
Nitrogen, Ammonia	19.9 mg/L	1.0	IVB0229	SM 4500-NH3 B,E	JDK	02/09/12 14:32	
Oil/Grease, animal/vegetable	127 mg/L	10	IVB0384	EPA 1664	DMC	02/14/12 12:56	
Oil/Grease, petroleum	<10 mg/L	10	IVB0384	EPA 1664	DMC	02/14/12 12:56	
Oil and Grease	134 mg/L	10	IVB0384	EPA 1664	DMC	02/14/12 12:56	
Nitrogen, Kjeldahl, total	128 mg/L	12.5	IVB0306	EPA 351.2	DRB	02/10/12 10:48	
Solids, total suspended	1120 mg/L	40	IVB0223	USGS I-3765-85	DMC	02/08/12 13:29	
Molybdenum, total	0.041 mg/L	0.010	IVB0217	EPA 200.7	VJM	02/09/12 20:27	
Flow	24250 Gallons	1.0000	IVB0235	Flow	JRP	02/07/12 8:40	
pH	8.0 pH	0.5	IVB0235	SM 4500 H+ B	JRP	02/07/12 8:40	
Temperature	14.0 °C	0.00	IVB0235	SM 2550 B	JRP	02/07/12 8:40	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1B20316

February 16, 2012  
Page 2 of 9

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	Notes
<b>Batch 1VB0185 - General Prep Micro</b>									
<b>Blank (1VB0185-BLK1)</b>									
CBOD (5 day) ND 4 mg/L Prepared & Analyzed: 02/08/12									
<b>Duplicate (1VB0185-DUP1)</b>									
Source: 1B20317-01 CBOD (5 day) 92.0 4 mg/L Prepared & Analyzed: 02/08/12 98.0 6.32 30									
<b>Duplicate (1VB0185-DUP2)</b>									
Source: 1B20322-01 CBOD (5 day) 1200 4 mg/L Prepared & Analyzed: 02/08/12 1120 7.32 30									
<b>Reference (1VB0185-SRM1)</b>									
CBOD (5 day) 150 4 mg/L Prepared & Analyzed: 02/08/12 198.000 75.8 84.6-115.4 QR-06									
<b>Batch 1VB0206 - Wet Chem Preparation</b>									
<b>Blank (1VB0206-BLK1)</b>									
Chemical Oxygen Demand ND 10 mg/L Prepared & Analyzed: 02/08/12									
<b>LCS (1VB0206-BS1)</b>									
Chemical Oxygen Demand 80.7 10 mg/L Prepared & Analyzed: 02/08/12 76.5000 106 79-110									
<b>Matrix Spike (1VB0206-MS1)</b>									
Source: 1B20312-04 Chemical Oxygen Demand 253 40 mg/L Prepared & Analyzed: 02/08/12 153.000 50.6 132 60-140									
<b>Matrix Spike Dup (1VB0206-MSD1)</b>									
Source: 1B20312-04 Chemical Oxygen Demand 235 40 mg/L Prepared & Analyzed: 02/08/12 153.000 50.6 121 60-140 7.22 26									
<b>Batch 1VB0207 - Wet Chem Preparation</b>									
<b>Blank (1VB0207-BLK1)</b>									
Cyanide, total ND 0.007 mg/L Prepared & Analyzed: 02/08/12									

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.



Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1B20316

February 16, 2012  
Page 3 of 9

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Notes
<b>Batch 1VB0207 - Wet Chem Preparation</b>								
<b>LCS (1VB0207-BS1)</b>								
Cyanide, total	0.021	0.007	mg/L	0.0200000	106	86-123		
<b>Matrix Spike (1VB0207-MS1)</b>								
	<b>Source: 1B20211-01</b>							
Cyanide, total	0.040	0.014	mg/L	0.0400000	ND	101	76-129	
<b>Matrix Spike Dup (1VB0207-MSD1)</b>								
	<b>Source: 1B20211-01</b>							
Cyanide, total	0.041	0.014	mg/L	0.0400000	ND	103	76-129	1.61 11
<b>Batch 1VB0223 - Wet Chem Preparation</b>								
<b>Blank (1VB0223-BLK1)</b>								
Solids, total suspended	ND	1	mg/L					
<b>LCS (1VB0223-BS1)</b>								
Solids, total suspended	12.9	1	mg/L	15.0000	86.0	67-111		
<b>Duplicate (1VB0223-DUP1)</b>								
	<b>Source: 1B20278-01</b>							
Solids, total suspended	20.8	3	mg/L	25.8			21.2	30
<b>Batch 1VB0229 - Wet Chem Preparation</b>								
<b>Blank (1VB0229-BLK1)</b>								
Nitrogen, Ammonia	ND	1.0	mg/L					
<b>LCS (1VB0229-BS1)</b>								
Nitrogen, Ammonia	9.6	1.0	mg/L	10.0000	96.5	87-110		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1B20316

February 16, 2012  
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**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
<b>Batch 1VB0229 - Wet Chem Preparation</b>										
<b>Matrix Spike (1VB0229-MS1)</b> Source: 1B20373-01      Prepared: 02/08/12 Analyzed: 02/09/12										
Nitrogen, Ammonia      10.5      1.0 mg/L      10.0000      0.4      101      85-110										
<b>Matrix Spike Dup (1VB0229-MSD1)</b> Source: 1B20373-01      Prepared: 02/08/12 Analyzed: 02/09/12										
Nitrogen, Ammonia      10.2      1.0 mg/L      10.0000      0.4      97.9      85-110      2.89      10										
<b>Reference (1VB0229-SRM1)</b> Prepared: 02/08/12 Analyzed: 02/09/12										
Nitrogen, Ammonia      9.8      1.0 mg/L      10.0000      97.9      75-125										
<b>Batch 1VB0306 - Wet Chem Preparation</b>										
<b>Blank (1VB0306-BLK1)</b> Prepared & Analyzed: 02/10/12										
Nitrogen, Kjeldahl, total      ND      0.50 mg/L										
<b>LCS (1VB0306-BS1)</b> Prepared & Analyzed: 02/10/12										
Nitrogen, Kjeldahl, total      15.9      0.50 mg/L      20.0000      79.4      82-116										
<b>Matrix Spike (1VB0306-MS1)</b> Source: 1B20194-01      Prepared & Analyzed: 02/10/12										
Nitrogen, Kjeldahl, total      12.0      0.50 mg/L      10.0000      1.82      102      81-124										
<b>Matrix Spike Dup (1VB0306-MSD1)</b> Source: 1B20194-01      Prepared & Analyzed: 02/10/12										
Nitrogen, Kjeldahl, total      11.8      0.50 mg/L      10.0000      1.82      99.9      81-124      1.48      11										
<b>Batch 1VB0384 - Wet Chem Preparation</b>										
<b>Blank (1VB0384-BLK1)</b> Prepared & Analyzed: 02/14/12										
Oil and Grease      ND      4 mg/L										
Oil/Grease, animal/vegetable      ND      4 "										
Oil/Grease, petroleum      ND      4 "										

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1B20316

February 16, 2012  
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**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	Notes
<b>Batch 1VB0384 - Wet Chem Preparation</b>									
<b>LCS (1VB0384-BS1)</b>									
Prepared & Analyzed: 02/14/12									
Oil and Grease	37	4	mg/L	40.0000	92.8	78-114			
Oil/Grease, animal/vegetable	22	4	"	20.0000	110	64-132			
Oil/Grease, petroleum	15	4	"	20.0000	76.0	64-132			
<b>Matrix Spike (1VB0384-MS1)</b>									
Source: 1B20410-01 Prepared & Analyzed: 02/14/12									
Oil and Grease	43	4	mg/L	40.0000	5	95.3	78-114		
Oil/Grease, animal/vegetable	25	4	"	20.0000	4	104	64-132		
Oil/Grease, petroleum	18	4	"	20.0000	ND	89.1	64-132		
<b>Matrix Spike Dup (1VB0384-MSD1)</b>									
Source: 1B20410-01 Prepared & Analyzed: 02/14/12									
Oil and Grease	45	4	mg/L	40.0000	5	102	78-114	5.80	18
Oil/Grease, animal/vegetable	28	4	"	20.0000	4	118	64-132	10.8	34
Oil/Grease, petroleum	18	4	"	20.0000	ND	87.7	64-132	1.60	34

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

February 16, 2012

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Work Order: 1B20316

**Determination of Total Metals - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VB0217 - EPA 3010A Digestion (Water)</b>										
<b>Blank (1VB0217-BLK1)</b>										
Molybdenum, total	ND	0.010	mg/L							
<b>LCS (1VB0217-BS1)</b>										
Molybdenum, total	0.186	0.010	mg/L	0.200000		92.9	85-115			
<b>Matrix Spike (1VB0217-MS1)</b>										
Molybdenum, total	0.187	0.010	mg/L	0.200000	0.0103	88.4	70-130			
<b>Matrix Spike Dup (1VB0217-MSD1)</b>										
Molybdenum, total	0.186	0.010	mg/L	0.200000	0.0103	88.1	70-130	0.309	20	
<b>Post Spike (1VB0217-PS1)</b>										
Molybdenum, total	0.196		mg/L	0.200000	0.0101	93.0	85-115			

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

Sauer-Danfoss  
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Ames, IA 50010

**Work Order:** 1B20316

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**Certified Analyses included in this Report**

Method/Matrix	Analyte	Certifications
<i>4500CN-E in Water</i>	Cyanide, total	KS-NT,NELAC,SIA1X
<i>EPA 1664 in Water</i>	Oil and Grease	KS-NT,NELAC,SIA1X
	Oil/Grease, animal/vegetable	KS-NT,NELAC,SIA1X
	Oil/Grease, petroleum	KS-NT,NELAC,SIA1X
<i>EPA 200.7 in Water</i>	Molybdenum, total	NELAC,SIA1X,KS-NT
<i>EPA 351.2 in Water</i>	Nitrogen, Kjeldahl, total	SIA1X,NELAC,KS-KC
<i>EPA 410.4 in Water</i>	Chemical Oxygen Demand	KS-NT,NELAC,SIA1X
<i>SM 2550 B in Water</i>	Temperature	SIA1X
<i>SM 4500-NH3 B,E in Water</i>	Nitrogen, Ammonia	KS-NT,NELAC
<i>SM 5210 B in Water</i>	CBOD (5 day)	SIA1X
<i>USGS I-3765-85 in Water</i>	Solids, total suspended	SIA1X,NELAC,KS-NT

Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2012
KS-NT	Kansas Department of Health and Environment	E-10287	10/30/2012
MO-KC	Missouri Department of Natural Resources	140	04/30/2012
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2012
SIA1X	Iowa Department of Natural Resources	95	02/01/2012

**Notes and Definitions**

- QL-03 The LCS was outside established acceptance limits. The batch was accepted based on acceptable ICV, CCV and MS/MSD results.
- QR-06 The reference standard was outside of established control limits.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.*

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1B20316

February 16, 2012

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End of Report

Sue Thompson

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Keystone Laboratories, Inc.

Sue Thompson  
Project Manager II

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.*

# Keystone

LABORATORIES, INC.



**MEMBER**  
ACCL

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1B20316

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

**CHAIN OF CUSTODY RECORD**

Page 1 of 1  
Printed: 12/29/2011 7:31:03AM

**Keystone LABORATORIES, INC.**

**SITE INFORMATION**

Sampler: \_\_\_\_\_  
Project: Quarterly Waste Pretreatment Pretreatment

**REPORT TO**

Gary Erickson  
Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

**INVOICE TO**

Accounts Payable  
Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

**SPECIAL INSTRUCTIONS**

None

**LAB USE ONLY**

Work Order 1B20316  
Temperature \_\_\_\_\_  
Turn-Cooler: No

**Custody Seal**  
 Containers Intact  
 COC/Labels Agree  
 Preservation Confirmed  
 Received On Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Temp	Flow	pH	Analyses	Lab Sample Number
01-001	Front Parking Lot North Manhole	Water		2/7/12	8:40				temperature mo-t-200.7 cbod-5210 cod-t-410.4 tkn-351.2 flow-total og-profile-1664 nh3-4500be cn-t-4500e ph-field-4500 tss-t-3765-85	01

Relinquished By Date/Time  
*Jean R. Pyle 2/7/12 14:00*

Received By Date/Time  
*Received for Lab By*

Relinquished By Date/Time  
*A. Johnson 2/7/12 2:20*

Received By Date/Time  
*Received for Lab By*

Remarks:

**Test America Analytical Report**

**2/22/12**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: 800-750-2401

TestAmerica Job ID: CVB1239

Client Project/Site: 10-233

Client Project Description: Sauer Danfoss - Ames, Iowa

For:

FEHR-GRAHAM & ASSOCIATES - FREEPORT

221 E. Main Street, Ste. 200

Freeport, IL 61032

Attn: Jeff Ogden



Authorized for release by:

4/3/2012 10:01:24 AM

Derrick Klinkenberg

Organics Manager

derrick.klinkenberg@testamericainc.com

### LINKS

Review your project  
results through

TotalAccess

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Case Narrative

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

Job ID: CVB1239

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Laboratory: TestAmerica Cedar Falls

### Narrative

This report was amended to remove an analysis not originally requested. DK 04-03-12

## Sample Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CVB1239-01	29942 - 1st Quarter 2012	Ground Water	02/22/12 09:50	02/22/12 13:00

4

## Detection Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

Client Sample ID: 29942 - 1st Quarter 2012

Lab Sample ID: CVB1239-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	4.48	CIN	1.00		ug/L	1.00		SW 8260B	Total
1,1-Dichloroethene	5.21		2.00		ug/L	1.00		SW 8260B	Total
cis-1,2-Dichloroethene	29.7		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	260		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	23.9		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	11.0		1.00		ug/L	1.00		SW 8260B	Total

5

## Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 10-233

TestAmerica Job ID: CVB1239

**Client Sample ID:** 29942 - 1st Quarter 2012

Date Collected: 02/22/12 09:50

Date Received: 02/22/12 13:00

**Lab Sample ID:** CVB1239-01

Matrix: Ground Water

6

### Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
1,1-Dichloroethane	4.48	CIN	1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
1,1-Dichloroethene	5.21		2.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
cis-1,2-Dichloroethene	29.7		1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
Methylene Chloride	<5.00		5.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
Tetrachloroethene	260		1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
1,1,1-Trichloroethane	23.9		1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
Trichloroethene	11.0		1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
Vinyl chloride	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
Xylenes, total	<3.00		3.00		ug/L		02/23/12 00:00	02/23/12 15:27	1.00
<b>Surrogate</b>									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	97		75 - 120				02/23/12 00:00	02/23/12 15:27	1.00
Toluene-d8	101		80 - 120				02/23/12 00:00	02/23/12 15:27	1.00
4-Bromofluorobenzene	98		75 - 110				02/23/12 00:00	02/23/12 15:27	1.00

### Method: SW 9041A - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		02/24/12 16:27	02/24/12 16:32	1.00

## Surrogate Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Ground Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVB1239-01	29942 - 1st Quarter 2012	97	101	98

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

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### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
12B0992-BLK1	Method Blank	95	101	95

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (80-120)
12B0992-BS1	Lab Control Sample	96	100	100
12B0992-BSD1	Lab Control Sample Dup	97	101	96

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

### Method: SW 8260B - Volatile Organic Compounds

**Lab Sample ID:** 12B0992-BLK1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12B0992

**Client Sample ID:** Method Blank

**Prep Type:** Total

**Prep Batch:** 12B0992\_P

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<10.0		10.0		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
1,1-Dichloroethane	<1.00	CIN	1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
Methylene Chloride	<5.00		5.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
Tetrachloroethene	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
Trichloroethene	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
Vinyl chloride	<1.00		1.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
Xylenes, total	<3.00		3.00		ug/L		02/23/12 00:00	02/23/12 11:39	1.00
<b>Surrogate</b>									
	Blank	Blank	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Dibromofluoromethane			95		75 - 120		02/23/12 00:00	02/23/12 11:39	1.00
Toluene-d8			101		80 - 120		02/23/12 00:00	02/23/12 11:39	1.00
4-Bromofluorobenzene			95		75 - 110		02/23/12 00:00	02/23/12 11:39	1.00

**Lab Sample ID:** 12B0992-BS1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12B0992

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total

**Prep Batch:** 12B0992\_P

%Rec.

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Acetone	20.0	19.6		ug/L		98	60 - 150
1,1-Dichloroethane	20.0	19.0	CIN	ug/L		95	60 - 130
1,2-Dichloroethane	20.0	17.6		ug/L		88	65 - 140
1,1-Dichloroethene	20.0	18.6		ug/L		93	60 - 135
cis-1,2-Dichloroethene	20.0	20.2		ug/L		101	70 - 135
trans-1,2-Dichloroethene	20.0	18.9		ug/L		95	60 - 145
Methylene Chloride	20.0	16.0		ug/L		80	55 - 145
Tetrachloroethene	20.0	21.3		ug/L		106	70 - 135
1,1,1-Trichloroethane	20.0	20.3		ug/L		102	60 - 125
1,1,2-Trichloroethane	20.0	19.9		ug/L		99	75 - 125
Trichloroethene	20.0	20.4		ug/L		102	70 - 130
Vinyl chloride	20.0	16.7		ug/L		84	45 - 135
Xylenes, total	60.0	61.8		ug/L		103	70 - 130
<b>Surrogate</b>							
	LCS	LCS	%Recovery	Qualifier	Limits		
Dibromofluoromethane			96		75 - 120		
Toluene-d8			100		80 - 120		
4-Bromofluorobenzene			100		80 - 120		

**Lab Sample ID:** 12B0992-BSD1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12B0992

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total

**Prep Batch:** 12B0992\_P

%Rec.

Analyte	Spike Added	LCS Dup		Unit	D	%Rec	Limits	RPD
		Result	Qualifier					
Acetone	20.0	19.0		ug/L		95	60 - 150	3

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 10-233

TestAmerica Job ID: CVB1239

### Method: SW 8260B - Volatile Organic Compounds (Continued)

**Lab Sample ID: 12B0992-BSD1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12B0992**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total**

**Prep Batch: 12B0992\_P**

Analyte	Spike Added	LCS Dup		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
1,1-Dichloroethane	20.0	18.0	CIN	ug/L		90	60 - 130	5	15	
1,2-Dichloroethane	20.0	17.2		ug/L		86	65 - 140	3	15	
1,1-Dichloroethene	20.0	17.5		ug/L		87	60 - 135	6	20	
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	70 - 135	4	15	
trans-1,2-Dichloroethene	20.0	18.0		ug/L		90	60 - 145	5	15	
Methylene Chloride	20.0	16.1		ug/L		81	55 - 145	0.7	20	
Tetrachloroethene	20.0	19.7		ug/L		99	70 - 135	7	15	
1,1,1-Trichloroethane	20.0	19.4		ug/L		97	60 - 125	5	15	
1,1,2-Trichloroethane	20.0	19.9		ug/L		100	75 - 125	0.2	15	
Trichloroethene	20.0	19.4		ug/L		97	70 - 130	5	20	
Vinyl chloride	20.0	16.0		ug/L		80	45 - 135	5	20	
Xylenes, total	60.0	59.5		ug/L		99	70 - 130	4	35	
<b>Surrogate</b>		<b>LCS Dup</b>	<b>LCS Dup</b>	<b>Limits</b>						
Dibromofluoromethane		97		75 - 120						
Toluene-d8		101		80 - 120						
4-Bromofluorobenzene		96		80 - 120						

8

## QC Association Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

### GCMS Volatiles

#### Analysis Batch: 12B0992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12B0992-BLK1	Method Blank	Total	Water - NonPotable	SW 8260B	12B0992_P
12B0992-BS1	Lab Control Sample	Total	Water - NonPotable	SW 8260B	12B0992_P
12B0992-BSD1	Lab Control Sample Dup	Total	Water - NonPotable	SW 8260B	12B0992_P
CVB1239-01	29942 - 1st Quarter 2012	Total	Ground Water	SW 8260B	12B0992_P

#### Analysis Batch: 12B1017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVB1239-01	29942 - 1st Quarter 2012	Total	Ground Water	SW 9041A	12B1017_P

#### Prep Batch: 12B0992\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12B0992-BLK1	Method Blank	Total	Water - NonPotable	SW 5030B	
12B0992-BS1	Lab Control Sample	Total	Water - NonPotable	SW 5030B	
12B0992-BSD1	Lab Control Sample Dup	Total	Water - NonPotable	SW 5030B	
CVB1239-01	29942 - 1st Quarter 2012	Total	Ground Water	SW 5030B	

#### Prep Batch: 12B1017\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVB1239-01	29942 - 1st Quarter 2012	Total	Ground Water	Default Prep VOC	

## Lab Chronicle

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

Client Sample ID: 29942 - 1st Quarter 2012

Lab Sample ID: CVB1239-01

Date Collected: 02/22/12 09:50

Matrix: Ground Water

Date Received: 02/22/12 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	12B0992_P	02/23/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12B0992	02/23/12 15:27	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12B1017_P	02/24/12 16:27	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12B1017	02/24/12 16:32	CMM	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

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## Definitions/Glossary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

### Qualifiers

#### GCMS Volatiles

Qualifier	Qualifier Description
CIN	The % RSD for this compound was above 15%. The average % RSD for all compounds in the calibration met the 15% criteria specified in EPA methods 8260B/8270C.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⊕	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Certification Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Cedar Falls	AIHA - LAP	IHLAP		101044
TestAmerica Cedar Falls	Illinois	NELAC	5	200024
TestAmerica Cedar Falls	Iowa	State Program	7	7
TestAmerica Cedar Falls	Kansas	NELAC	7	E-10341
TestAmerica Cedar Falls	Minnesota	NELAC	5	019-999-319
TestAmerica Cedar Falls	North Dakota	State Program	8	R-186
TestAmerica Cedar Falls	Oregon	NELAC	10	IA100001
TestAmerica Cedar Falls	Wisconsin	State Program	5	999917270

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

## Method Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 10-233

TestAmerica Job ID: CVB1239

Method	Method Description	Protocol	Laboratory
SW 8260B	Volatile Organic Compounds	TAL CF	TAL CF
SW 9041A	VOC Preservation Check		

**Protocol References:**

**Laboratory References:**

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401



Sauer Danfoss – Ames Iowa  
TA Work Order #CVB1239

### Case Narrative

TestAmerica – Cedar Falls received 1 sample on February 22, 2012 on ice. Requested analysis were for 8260 Volatiles, Sulfate, and 1,4-Dioxane by 8260 SIM.

Sample ID		Date	
Field	Lab ID	Collected	Received
29942 – 1 <sup>st</sup> Quarter 2012	CVB1239-01	02/22/12 0950	02/22/12

#### 8260 Volatiles (Batch #12B0992)

Method Blank – No detections of target compounds.

Laboratory Control Sample (LCS) – No deviations

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) – No deviations

Sample surrogates – No deviations

Sample Dilutions – No dilutions were performed on this SDG.

#### Clarification of Data Qualifier:

CIN: The %RSD for the calibration of 1,1-Dichloroethane (21%) used in result determination was above method specified %15.

#### 8260 1,4-Dioxane (Batch#9927)

Method Blank – No deviations

Laboratory Control Sample (LCS) – No deviations

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) – No deviations

Sample surrogates – No deviations.

Sample Dilutions – No deviations

Cedar Falls  
704 Enterprise Drive

Cedar Falls, IA 50613  
phone 319.277.2401 fax 319.277.2425

## Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager:	Site Contact:		Date:	COC No:
Fehr-Graham & Associates 221 East Main Street Ste. 200 Freeport, IL 61032 815-235-7643 815-235-4632 Project Name: Sauer Ames Site: P O #	Tel/Fax:	Lab Contact:		Carrier:	of COCs
Analysis Turnaround Time Calendar (C) or Work Days (W) <u>Standard</u>					
TAT if different from Below					
<input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day					
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.
29942-1st Quarter 2012	2/22	9:50A	WW	4	X
VOC-EPA Method 8260					
Filtered Sample					
Preservation Used: 1=Ice; 2=HCl; 3=H <sub>2</sub> SO <sub>4</sub> ; 4=HNO <sub>3</sub> ; 5=NaOH; 6=Other					
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Special Instructions/QC Requirements & Comments:  <i>Send report to bpaluzzi@fgraham.com</i>					
Relinquished by: <i>Jean Miller</i>	Company: <i>Fehr-Graham</i>	Date/Time: <i>2/22/12</i>	Received by: <i>Mark Edwards</i>	Company: <i>TA-CF</i>	Date/Time: <i>2-22-12 1:00P</i>
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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4/3/2012

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613  
800-750-2401 • 319-277-2425 FAX

## Sample Receipt and Temperature Log Form

Client: Fehr-Graham

Project: Sauer Ames

City: \_\_\_\_\_

Date: 2-22-12 Receiver's Initials: ME Time (Delivered): 1:00

### Temperature Record:

#### **Cooler ID# (If Applicable)**

Client

°C / On Ice

### Thermometer:

- IR - 111531565 'D'
- IR - 111531506 'E'
- IR - 61854108 'Front'
- 
- 101681126

Temp Blank

Temperature out of compliance

### Courier:

- |  |  |
|--|--|
| <input type="checkbox"/> UPS               | <input type="checkbox"/> TA Courier        |
| <input type="checkbox"/> FedEx             | <input type="checkbox"/> TA Field Services |
| <input type="checkbox"/> FedEx Ground      | <input checked="" type="checkbox"/> Client |
| <input type="checkbox"/> US Postal Service | <input type="checkbox"/> Other             |
| <input type="checkbox"/> Spee-Dee          | _____                                      |

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | Sample(s) not received in a cooler.                    |
| <input checked="" type="checkbox"/> | Samples(s) received same day of sampling.              |
| <input checked="" type="checkbox"/> | Evidence of a chilling process                         |
| <input type="checkbox"/>            | No Temp. Blank. Inside temperature of cooler recorded. |
| <input checked="" type="checkbox"/> | Temperature not taken:                                 |

\*Refer to SOP CF-SS-01 for Temperature Criteria



**CITY OF AMES, IOWA**  
**Water and Pollution Control Department**

**Non-Domestic Wastewater Discharge Permit**

Non-Significant

<b>Facility Name</b>	Sauer Danfoss	<b>Permit No.</b>	6593-9
<b>Facility Location/ Address</b>	2800 East 13 <sup>th</sup> Street Ames, IA 50010	<b>Issue Date</b>	01/01/2012
		<b>Expiration Date</b>	12/31/2016

**Authorized Representative**

<b>Name</b>	Doug Baggett		
<b>Title</b>	Environmental Health & Safety Leader		
<b>Address</b>	2800 East 13 <sup>th</sup> Street Ames, IA 50010		
<b>Telephone No.</b>	515-956-5253	<b>Fax No.</b>	515-239-6400
<b>E-Mail Address</b>	dbaggett@sauer-danfoss.com		

**For the City of Ames, Iowa**

By \_\_\_\_\_  
**Water and Pollution Control Department**

This permit is issued pursuant to the authority of Chapter 28 Ames Municipal Code. Permittee is hereby authorized to discharge wastewater from the Facility identified above provided said discharge meets all quality and quantity limitations and Permittee complies with all other conditions, including monitoring, reporting, and other terms as set forth in this Permit and the City of Ames Pretreatment Program. Any existing permit or discharge authorization previously used by the City of Ames for this Facility is hereby revoked by the issue of this Permit. This Permit may not be assigned or transferred by the Permittee unless authorized in writing by the City.

Failure to meet the standards and requirements of this permit and the pretreatment program may result in a municipal infraction punishable by a penalty of up to \$1,000 for the first and each subsequent violation. Each occurrence of prohibited discharge is a violation.

### Permit Limits

Permittee is prohibited from discharging any pollutants more frequently or in excess of the limitations specified below.

Wastewater Parameter	Units	Maximum <sup>1</sup>
pH (grab)	Standard units	6.0 to 10.0
Total Suspended Solids (TSS)	mg/L	1,600
Chloride	mg/L	500
Cyanide	mg/L	0.88
Ammonia (NH <sub>3</sub> )	mg/L	225
Total Kjeldahl Nitrogen (TKN)	mg/L	280
Oil & Grease	mg/L	300
CBOD <sub>5</sub>	mg/L	1,800
COD	mg/L	2,700
Copper	mg/L	0.57
Molybdenum	mg/L	0.29
Zinc	mg/L	4.3
TEH (diesel)	mg/L	10

1 – "Maximum" means the total discharge by mass, volume, or concentration which cannot be exceeded during any 24-hour period. Compliance shall be determined by 24-hour composite sampling except for those parameters (such as pH, temperature, etc.) where individual grab samples are specified.

### Slug Discharge/Spill Control Plan

It has been determined, pursuant to federal regulations (40 CFR 403.8(f)(2)(vi)), that the Permittee is required to prepare and implement a Slug Discharge/Spill Control Plan. A slug discharge/spill is any discharge to the sanitary sewer system of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause interference, pass-through, or otherwise inhibit any wastewater treatment or biosolids disposal process, create a toxic or nuisance condition in the POTW or receiving stream, or cause a violation of local, state or federal regulations. The Slug Discharge/Spill Control Plan shall contain, at a minimum, the following elements.

- A. Description of discharge practices, including non-routine batch discharges
- B. Description of stored chemicals
- C. Procedures for immediately notifying the City of Ames Water Pollution Control Facility (515-232-7423) of slug discharges, including any discharge that would violate a prohibition under section 403.5(b) of the Code of Federal Regulations, as amended, with procedures for follow-up written notification within five days
- D. Procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic pollutants (including solvents), and/or measures and equipment of emergency response

**Permittee shall abide by the Slug Discharge/Spill Control Plan dated July 2008 and any subsequent revisions to the plan.**

### Monitoring Requirements

Samples shall be collected, analyzed, and reported as specified below. All samples and measurements shall be representative of the volume and nature of the permitted discharge. All samples shall be collected and analyzed in accordance with procedures approved by the U.S. EPA. Composited samples shall be 24-hour flow-proportional, except on a case-by-case basis with documented cause and approval from the City of Ames Water and Pollution Control Department administrative staff.

### Non-Domestic User Self-Monitoring

Monitoring Location: Manhole NW of building

Parameter	Frequency	Sample Type
Flow	Monthly & while sampling	Water meter & sampling weir
pH	Each sample	Grab
TSS	Once/3 months	24-hr flow-proportional composite
Cyanide	Once/3 months	Grab
Ammonia (NH <sub>3</sub> )	Once/3 months	24-hr flow-proportional composite
Total Kjeldahl Nitrogen (TKN)	Once/3 months	24-hr flow-proportional composite
Oil & Grease	Once/3 months	Grab
CBOD <sub>5</sub>	Once/3 months	24-hr flow-proportional composite
COD	Once/3 months	24-hr flow-proportional composite

Monitoring Location: Groundwater remediation discharge

Parameter	Frequency	Sample Type
Flow	Monthly	Metered
Acetone	Once/3 months	Grab
1,1-dichloroethane	Once/3 months	Grab
1,1-dichloroethene	Once/3 months	Grab
1,2-dichloroethene	Once/3 months	Grab
1,1,1-Trichloroethane	Once/3 months	Grab
Trichloroethene	Once/3 months	Grab
Tetrachloroethene	Once/3 months	Grab
Total Xylenes	Once/3 months	Grab

Self-monitoring results shall be submitted to the City of Ames Pretreatment Coordinator, Water Plant, 300 E. 5<sup>th</sup> Street, Ames, IA 50010 as soon as they are received. Monitoring reports shall be submitted to the City of Ames Pretreatment Coordinator at least quarterly. All reports shall be submitted not later than 10 days following the end of the reporting period. City monitoring reports shall be reviewed, signed, dated, and returned by the date specified on the report.

**City Monitoring**

Monitoring Location: Manhole NW of building

Parameter	Frequency	Sample Type
Flow	Monthly & while sampling	Water meter & sampling weir
pH	Each sample	Grab
TSS	Once/6 months	24-hr flow-proportional composite
TDS	Annually	24-hr flow-proportional composite
Chloride	Once/6 months	24-hr flow-proportional composite
Cyanide	Once/6 months	Grab
Ammonia (NH <sub>3</sub> )	Once/6 months	24-hr flow-proportional composite
Total Kjeldahl Nitrogen (TKN)	Once/6 months	24-hr flow-proportional composite
Oil & Grease	Once/6 months	Grab
CBOD <sub>5</sub>	Once/6 months	24-hr flow-proportional composite
COD	Once/6 months	24-hr flow-proportional composite
Phenol	Once/2 years	Grab
Total Phosphorus	Annually	24-hr flow-proportional composite
Arsenic	Once/2 years	24-hr flow-proportional composite
Cadmium	Once/Annually	24-hr flow-proportional composite
Total Chromium	Once/2 years	24-hr flow-proportional composite
Copper	Once/6 months	24-hr flow-proportional composite
Lead	Once/2 years	24-hr flow-proportional composite
Manganese	Once/2 years	24-hr flow-proportional composite
Mercury	Once/2 years	24-hr flow-proportional composite
Molybdenum	Once/6 months	24-hr flow-proportional composite
Nickel	Once/2 years	24-hr flow-proportional composite
Selenium	Once/2 years	24-hr flow-proportional composite
Silver	Once/6 months	24-hr flow-proportional composite
Zinc	Annually	24-hr flow-proportional composite
Total Extractable Hydrocarbons	Annually	24-hr flow-proportional composite
Acetone	Once/6 months	Grab
1,1-dichloroethane	Once/6 months	Grab
1,1-dichloroethene	Once/6 months	Grab
1,2-dichloroethene	Once/6 months	Grab
1,1,1-Trichloroethane	Once/6 months	Grab
Trichloroethene	Once/6 months	Grab
Tetrachloroethene	Once/6 months	Grab
Total Xylenes	Once/6 months	Grab

**Jason Miller**

---

**From:** Sue Thompson [[sthompson@keystonelabresults.com](mailto:sthompson@keystonelabresults.com)]  
**Sent:** Friday, April 13, 2012 5:40 PM  
**To:** Jason Miller  
**Subject:** RE: Amended Report for S-D

Hey Jason -

The report for this quarter was completed and emailed out just after 5:00 yesterday afternoon. I have removed the molybdenum from the project set up now and it won't show up in future reports.

Sorry for the inconvenience this quarter.  
Sue

Visit us at [www.keystonelabs.com](http://www.keystonelabs.com)

Sue Thompson  
Project Manager II  
Keystone Laboratories, Inc.  
600 East 17th Street South  
Newton, IA 50208  
641-792-8451  
[sthompson@keystonelabs.com](mailto:sthompson@keystonelabs.com)

**Confidentiality Notice**

Because access to receiving equipment is not under our control, Keystone Laboratories, Inc. cannot be responsible for the confidentiality of electronically transmitted data unless prior arrangements have been made.

---

**From:** Jason Miller [<mailto:jmiller@fehr-graham.com>]  
**Sent:** Friday, April 13, 2012 7:28 AM  
**To:** 'sthompson@keystonelabs.com'  
**Cc:** Amy Schneiderman  
**Subject:** RE: Amended Report for S-D

Sue,

One more thing, would you remove molybdenum from the quarterly self monitoring parameters going forward and also do not include the results in this quarter's report? The City of Ames removed the constituent from the quarterly self-monitoring requirements in the permit that was issued in January.

Thank you,

Jason Miller, CHMM  
Environmental Specialist  
Fehr-Graham & Associates  
221 E. Main Street, Suite 200  
Freeport, Illinois 61032  
(815) 235-7643 Phone  
(815) 235-4632 Fax

---

**From:** Sue Thompson [<mailto:sthompson@keystonelabresults.com>]  
**Sent:** Thursday, April 12, 2012 3:30 PM  
**To:** Jason Miller  
**Subject:** RE: Amended Report for S-D

Hey Jason -  
It was sampled 04/03/12.  
Sue

Visit us at [www.keystonelabs.com](http://www.keystonelabs.com)

Sue Thompson  
Project Manager II  
Keystone Laboratories, Inc.  
600 East 17th Street South  
Newton, IA 50208  
641-792-8451  
[sthompson@keystonelabs.com](mailto:sthompson@keystonelabs.com)

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Because access to receiving equipment is not under our control, Keystone Laboratories, Inc. cannot be responsible for the confidentiality of electronically transmitted data unless prior arrangements have been made.

---

**From:** Jason Miller [<mailto:jmiller@fehr-graham.com>]  
**Sent:** Thursday, April 12, 2012 3:17 PM  
**To:** 'sthompson@keystonelabs.com'  
**Subject:** RE: Amended Report for S-D

Sue,

When were you scheduled to complete the 2<sup>nd</sup> quarter sampling? Sauer would like to wait until after May 1<sup>st</sup>.

Thank you,

Jason Miller, CHMM  
Environmental Specialist  
Fehr-Graham & Associates  
221 E. Main Street, Suite 200  
Freeport, Illinois 61032  
(815) 235-7643 Phone  
(815) 235-4632 Fax

---

**From:** Sue Thompson [<mailto:sthompson@keystonelabresults.com>]  
**Sent:** Thursday, April 12, 2012 8:27 AM  
**To:** Amy Schneiderman; Jason Miller  
**Subject:** Amended Report for S-D

Have a great day!

Visit us at [www.keystonelabs.com](http://www.keystonelabs.com)

Sue Thompson  
Project Manager II  
Keystone Laboratories, Inc.  
600 East 17th Street South  
Newton, IA 50208  
641-792-8451  
[sthompson@keystonelabs.com](mailto:sthompson@keystonelabs.com)

Confidentiality Notice  
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Cedar Falls  
704 Enterprise Drive

Cedar Falls, IA 50613  
phone 319.277.2401 fax 319.277.2425

## Chain of Custody Record

TestAmerica  
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact		Project Manager:			Site Contact:		Date:		COC No:	
Fehr-Graham & Associates 221 East Main Street Ste. 200 Freeport, IL 61032 815-235-7643 815-235-4632 Project Name: Sauer Ames Site: P O #	Tel/Fax:  Analysis Turnaround Time Calendar (C) or Work Days (W) Standard TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day			Lab Contact:		Carrier:		of ____ COCs		
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCS-Method 8260	Job No.	
29942-1st Quarter 2012.		2/22	9:50A	WW			X		SDG No.	
Sample Specific Notes:										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____										
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>					Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab. <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements & Comments:  Send report to bpaluzzi@fehr-graham.com										
Relinquished by: <i>Jean Miller</i>	Company: Fehr-Graham	Date/Time: 2/22/12	Received by: <i>Mark Edward</i>	Company: TA-CF	Date/Time: 2-22-12 1:00P					
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:					
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:					



FEHR-GRAHAM & ASSOCIATES  
Engineering & Science Consultants

# FILE COPY

SOLUTIONS SINCE 1973

221 E Main St Suite 200  
Freeport IL 61032  
ph 815 235 7643  
fax 815 235 4632  
[www.fehr-graham.com](http://www.fehr-graham.com)

UPS 2<sup>nd</sup> Day Tracking Number: 1Z 651 395 07 5194 8182

July 5, 2012

Mr. Gary Erickson  
Sauer-Danfoss (US) Company  
2800 East 13<sup>th</sup> Street  
Ames, IA 50010

## RE: Non-Domestic Waste Pretreatment Program Quarterly Report -2nd Quarter 2012

Dear Mr. Erickson:

Enclosed please find three copies of the above-referenced documents. Please review for completeness and accuracy. If satisfactory, sign and date where indicated. The original set, along with the enclosed cover letter, should be forwarded to the Water and Pollution Control Department for the City of Ames. For your convenience, certified mailing labels are enclosed. Please retain two additional copies and I will file next time I am on-site.

A hardcopy of the entire report must be received by the City of Ames no later than July 10, 2012.

If you have any questions regarding the enclosed documents, please do not hesitate to contact this office.

Sincerely,

Jason Miller, CHMM  
Environmental Specialist

JAM:mll

O:\Sauer-Danfoss, Inc\12-313\Final\JAM 12-313 - 2nd Qtr Wastewater to City of Ames.doc  
Enclosures



FEHR-GRAHAM & ASSOCIATES  
Engineering & Science Consultants

# FILE COPY

SOLUTIONS SINCE 1973

CERTIFIED MAIL NUMBER: 7011 3500 0000 1535 3703  
RETURN RECEIPT REQUESTED

221 E Main St Suite 200  
Freeport IL 61032  
ph 815 235 7643  
fax 815 235 4632  
[www.fehr-graham.com](http://www.fehr-graham.com)

July 9, 2012

City of Ames, Iowa  
Water and Pollution Control Department  
300 East Fifth Street, Building 1  
Ames, IA 50010

**RE: Non-Domestic Waste Pretreatment Program Quarterly Report – 2nd Quarter 2012**  
**Sauer-Danfoss (US) Company**  
**2800 East 13<sup>th</sup> Street**  
**Ames, IA 50010**  
**Facility Permit No. 6593-9**

Dear Sir or Madam:

Enclosed please find the Non-Domestic Waste Pretreatment Program Quarterly Report for wastewater discharge from the above-referenced facility for the 2nd quarter of 2012. Also enclosed are copies of the analytical reports from Keystone Labs and Test America for the analysis of wastewater and groundwater remediation respectively and a summary of monthly flow in gals/month from the groundwater remediation project.

Should you have any questions regarding these documents, please do not hesitate to contact this office.

Sincerely,

Jason Miller, CHMM  
Environmental Specialist

JAM:mll  
O:\Sauer-Danfoss, Inc\12-313\Final\JAM 12-313 - 2nd Qtr Wastewater to City of Ames.doc  
Enclosures

cc: Sauer-Danfoss (with enclosure)

**Non-Domestic Waste Pretreatment Program**

**Quarterly Report**

**(Non-Significant, Non-Domestic Contributor)**

**2nd Quarter 2012**

**Reporting Period: 4/1/2012 to 6/30/2012**

**Submit results on or before the 10th of the month following the end of the quarter**

**Facility:** Sauer-Danfoss

**Permit No:** 6593-9

**Facility Contact:** Gary Erickson

**Facility Phone No:** 515-239-6000

**Sampling Location:** Front Parking Lot North Manhole (Wastewater)/On-Site Wastewater Treatment  
**Sample Port (GW Remediation)**

**Sample Type:** Grab & 24 Hour Composite

**Sample Date:** 5/9/12 (GW Remediation) / 4/3/12 (Wastewater)

Analyte	Permit Limit Mg/L	Sample Results Mg/L
Facility Flow	Sauer Danfoss 2800 East 13th Gals/Day	Sauer Danfoss 2800 East 13th 34,660
pH	6-10 pH	8.10
TSS	1,600	808
Cyanide	0.88	<0.007
Ammonia (NH3)	225	21.6
Total Kjeldahl Nitrogen (TKN)	280	37.3
Oil & Grease	300	43
CBOD 5	1,800	776
COD	2,700	1,910
Molybdenum	0.29	0.02
<b>GW remediation</b>		
Max Expected Concentration ug/L		
Flow (remediation)	Gals/Quart	379,639
Acetone	44	<10.0
1,1-Dichloroethane	370	5
1,1-Dichloroethene	170	5.42
cis- 1,2-Dichloroethene	490	31.0
Tetrachloroethene	1700	227
1,1,1-Trichloroethane	650	19.5
Trichloroethylene	110	9.57
Total Xylenes	11	<3.0

Note: Please attach sample results from Laboratory

Process or Treatment Change: None

Additional Comments: Please see attached for Groundwater Remediation Flow Data.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who true, accurate, and complete, I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed \_\_\_\_\_

Authorized Representative

Date \_\_\_\_\_

Sauer-Danfoss  
Ames, IA  
Groundwater Remediation Flow Data

April 2012	174,266
May 2012	138,096
June 2012	67,277
Total flow (gals) 2nd Quarter:	379,639
	4,172 gpd

# of days in Quarter =

91

# **Keystone Analytical Report**

**4/03/12**

## ANALYTICAL REPORT

April 12, 2012

Page 1 of 9

Work Order: 1D20125

Report To	Work Order Information
Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010	Date Received: 04/03/2012 3:00PM Collector: Pryke, Jim Phone: (515) 239-6539 PO Number: 4501784596

Project : Quarterly Waste Pretreatment

Project Number: Pretreatment

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1D20125-01	Front Parking Lot North Manhole			Matrix:Water		Collected: 04/03/12 08:40	
CBOD (5 day)	776 mg/L	4	IVD0077	SM 5210 B	JRP	04/04/12 7:00	
Cyanide, total	<0.007 mg/L	0.007	IVD0141	4500CN-E	SAI	04/05/12 14:31	
Chemical Oxygen Demand	1910 mg/L	200	IVD0098	EPA 410.4	SAI	04/04/12 17:07	
Nitrogen, Ammonia	21.6 mg/L	1.0	IVD0218	SM 4500-NH3 B.E	JDK	04/09/12 14:58	
Oil/Grease, animal/vegetable	40 mg/L	4	IVD0330	EPA 1664	DMC	04/11/12 8:12	
Oil/Grease, petroleum	<4 mg/L	4	IVD0330	EPA 1664	DMC	04/11/12 8:12	
Oil and Grease	43 mg/L	4	IVD0330	EPA 1664	DMC	04/11/12 8:12	
Nitrogen, Kjeldahl, total	37.3 mg/L	5.00	IVD0223	EPA 351.2	SAI	04/09/12 16:06	
Solids, total suspended	808 mg/L	40	IVD0246	USGS I-3765-85	DMC	04/09/12 8:27	
Molybdenum, total	0.020 mg/L	0.010	IVD0239	EPA 200.7	RVV	04/10/12 19:13	
Flow	34660 Gallons	1.0000	IVD0185	Flow	JRP	04/03/12 8:40	
pH	8.1 pH	0.5	IVD0185	SM 4500 H+ B	JRP	04/03/12 8:40	
Temperature	17.3 °C	0.00	IVD0185	SM 2550 B	JRP	04/03/12 8:40	

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

**Work Order:** 1D20125

April 12, 2012  
Page 2 of 9

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch IVD0077 - General Prep Micro</b>										
<b>Blank (IVD0077-BLK1)</b>										
CBOD (5 day) ND 4 mg/L Prepared & Analyzed: 04/04/12										
<b>Duplicate (IVD0077-DUP1)</b>										
Source: ID20123-01 CBOD (5 day) 1180 4 mg/L 1100 Prepared & Analyzed: 04/04/12 7.81 30										
<b>Duplicate (IVD0077-DUP2)</b>										
Source: ID20125-01 CBOD (5 day) 908 4 mg/L 776 Prepared & Analyzed: 04/04/12 15.7 30										
<b>Reference (IVD0077-SRM1)</b>										
CBOD (5 day) 168 4 mg/L 198.000 84.8 84.6-115.4 Prepared & Analyzed: 04/04/12										
<b>Batch IVD0098 - Wet Chem Preparation</b>										
<b>Blank (IVD0098-BLK1)</b>										
Chemical Oxygen Demand ND 10 mg/L Prepared & Analyzed: 04/04/12										
<b>LCS (IVD0098-BS1)</b>										
Chemical Oxygen Demand 78.9 10 mg/L 76.5000 103 79-110 Prepared & Analyzed: 04/04/12										
<b>Matrix Spike (IVD0098-MS1)</b>										
Source: IC21321-04 Chemical Oxygen Demand 173 40 mg/L 153.000 11.6 106 60-140 Prepared & Analyzed: 04/04/12										
<b>Matrix Spike Dup (IVD0098-MSD1)</b>										
Source: IC21321-04 Chemical Oxygen Demand 149 40 mg/L 153.000 11.6 90.1 60-140 14.8 26 Prepared & Analyzed: 04/04/12										
<b>Batch IVD0141 - Wet Chem Preparation</b>										
<b>Blank (IVD0141-BLK1)</b>										
Cyanide, total ND 0.007 mg/L Prepared & Analyzed: 04/05/12										

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

April 12, 2012  
Page 3 of 9

Work Order: 1D20125

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD Limit	Notes
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**Batch 1VD0141 - Wet Chem Preparation**

LCS (1VD0141-BS1)	Prepared & Analyzed: 04/05/12							
Cyanide, total	0.020	0.007	mg/L	0.0200000	100	86-123		
Matrix Spike (1VD0141-MS1)	Source: 1C21569-01 Prepared & Analyzed: 04/05/12							
Cyanide, total	0.023	0.007	mg/L	0.0200000	ND	113	76-129	
Matrix Spike Dup (1VD0141-MSD1)	Source: 1C21569-01 Prepared & Analyzed: 04/05/12							
Cyanide, total	0.022	0.007	mg/L	0.0200000	ND	110	76-129	
						2.94	11	

**Batch 1VD0218 - Wet Chem Preparation**

Blank (1VD0218-BLK1)	Prepared: 04/06/12 Analyzed: 04/09/12						
Nitrogen, Ammonia	ND	1.0	mg/L				
LCS (1VD0218-BS1)	Prepared: 04/06/12 Analyzed: 04/09/12						
Nitrogen, Ammonia	9.0	1.0	mg/L	10.0000	90.1	87-110	
Matrix Spike (1VD0218-MS1)	Source: 1D20154-01 Prepared: 04/06/12 Analyzed: 04/09/12						
Nitrogen, Ammonia	9.2	1.0	mg/L	10.0000	ND	91.6	85-110
Matrix Spike Dup (1VD0218-MSD1)	Source: 1D20154-01 Prepared: 04/06/12 Analyzed: 04/09/12						
Nitrogen, Ammonia	9.0	1.0	mg/L	10.0000	ND	90.1	85-110
Reference (1VD0218-SRM1)	Prepared: 04/06/12 Analyzed: 04/09/12						
Nitrogen, Ammonia	8.9	1.0	mg/L	10.0000	88.6	75-125	

**Batch 1VD0223 - Wet Chem Preparation**

Blank (1VD0223-BLK1)	Prepared: 04/06/12 Analyzed: 04/09/12						
Nitrogen, Kjeldahl, total	ND	0.50	mg/L				

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1D20125

April 12, 2012  
Page 4 of 9

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VD0223 - Wet Chem Preparation</b>										
<b>Blank (1VD0223-BLK2)</b>										
Nitrogen, Kjeldahl, total	ND	0.50	mg/L							
<b>LCS (1VD0223-BS1)</b>										
Nitrogen, Kjeldahl, total	20.2	0.50	mg/L	20.000		101	82-116			
<b>Matrix Spike (1VD0223-MS1)</b>										
Nitrogen, Kjeldahl, total	13.8	0.50	mg/L	10.000	4.02	97.5	81-124			
<b>Matrix Spike (1VD0223-MS2)</b>										
Nitrogen, Kjeldahl, total	9.85	0.50	mg/L	10.000	ND	98.5	81-124			
<b>Matrix Spike Dup (1VD0223-MSD1)</b>										
Nitrogen, Kjeldahl, total	13.7	0.50	mg/L	10.000	4.02	96.9	81-124	0.436	11	
<b>Matrix Spike Dup (1VD0223-MSD2)</b>										
Nitrogen, Kjeldahl, total	9.84	0.50	mg/L	10.000	ND	98.4	81-124	0.0406	11	
<b>Batch 1VD0246 - Wet Chem Preparation</b>										
<b>Blank (1VD0246-BLK1)</b>										
Solids, total suspended	ND	1	mg/L							
<b>LCS (1VD0246-BS1)</b>										
Solids, total suspended	13.7	1	mg/L	15.000		91.3	67-111			
<b>Duplicate (1VD0246-DUP1)</b>										
Solids, total suspended	1.3	3	mg/L		ND					30

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

April 12, 2012  
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Work Order: 1D20125

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1VD0330 - Wet Chem Preparation**

**Blank (1VD0330-BLK1)**

Oil and Grease	ND	4	mg/L
Oil/Grease, animal/vegetable	ND	4	"
Oil/Grease, petroleum	ND	4	"

Prepared & Analyzed: 04/11/12

**LCS (1VD0330-BS1)**

Oil and Grease	35	4	mg/L	40.0000	88.2	78-114
Oil/Grease, animal/vegetable	19	4	"	20.0000	95.0	64-132
Oil/Grease, petroleum	16	4	"	20.0000	81.5	64-132

Prepared & Analyzed: 04/11/12

**Matrix Spike (1VD0330-MS1)**

Oil and Grease	45	4	mg/L	40.0000	13	79.7	78-114
Oil/Grease, animal/vegetable	23	4	"	20.0000	10	66.5	64-132
Oil/Grease, petroleum	21	4	"	20.0000	3	93.0	64-132

Source: 1D20205-01

Prepared & Analyzed: 04/11/12

**Matrix Spike Dup (1VD0330-MSD1)**

Oil and Grease	47	4	mg/L	40.0000	13	84.7	78-114	4.33	18
Oil/Grease, animal/vegetable	28	4	"	20.0000	10	91.6	64-132	19.5	34
Oil/Grease, petroleum	18	4	"	20.0000	3	77.8	64-132	15.4	34

Source: 1D20205-01

Prepared & Analyzed: 04/11/12

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

**Work Order:** 1D20125

April 12, 2012  
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**Determination of Total Metals - Quality Control**

**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VD0239 - EPA 3005A Total Recoverable Metals</b>										
Blank (1VD0239-BLK1)						Prepared: 04/09/12	Analyzed: 04/10/12			
Molybdenum, total	ND	0.010	mg/L							
LCS (1VD0239-BS1)						Prepared: 04/09/12	Analyzed: 04/10/12			
Molybdenum, total	0.220	0.010	mg/L	0.200000		110	85-115			
LCS (1VD0239-BS2)						Prepared: 04/09/12	Analyzed: 04/10/12			
Molybdenum, total	0.222	0.010	mg/L	0.200000		111	85-115			
LCS (1VD0239-BS3)						Prepared: 04/09/12	Analyzed: 04/10/12			
Molybdenum, total	0.228	0.010	mg/L	0.200000		114	85-115			
LCS (1VD0239-BS4)						Prepared: 04/09/12	Analyzed: 04/10/12			
Molybdenum, total	0.230	0.010	mg/L	0.200000		115	85-115			
Matrix Spike (1VD0239-MS1)	<b>Source: ID20190-02</b>					Prepared: 04/09/12	Analyzed: 04/10/12			
Molybdenum, total	0.230	0.010	mg/L	0.200000	0.00326	113	70-130			
Matrix Spike Dup (1VD0239-MSD1)	<b>Source: ID20190-02</b>					Prepared: 04/09/12	Analyzed: 04/10/12			
Molybdenum, total	0.221	0.010	mg/L	0.200000	0.00326	109	70-130	4.05	20	
Post Spike (1VD0239-PS1)	<b>Source: ID20190-02</b>					Prepared: 04/09/12	Analyzed: 04/10/12			
Molybdenum, total	0.205		mg/L	0.200000	0.00319	101	85-115			

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

April 12, 2012  
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Work Order: 1D20125

Certified Analyses included in this Report

Method/Matrix	Analyte	Certifications
<i>4500CN-E in Water</i>	Cyanide, total	KS-NT,NELAC,SIA1X
<i>EPA 1664 in Water</i>	Oil and Grease	KS-NT,NELAC,SIA1X
	Oil/Grease, animal/vegetable	KS-NT,NELAC,SIA1X
	Oil/Grease, petroleum	KS-NT,NELAC,SIA1X
<i>EPA 200.7 in Water</i>	Molybdenum, total	NELAC,SIA1X,KS-NT
<i>EPA 351.2 in Water</i>	Nitrogen, Kjeldahl, total	SIA1X,NELAC,KS-KC
<i>EPA 410.4 in Water</i>	Chemical Oxygen Demand	KS-NT,NELAC,SIA1X
<i>SM 2550 B in Water</i>	Temperature	SIA1X
<i>SM 4500-NH3 B,E in Water</i>	Nitrogen, Ammonia	KS-NT,NELAC
<i>SM 5210 B in Water</i>	CBOD (5 day)	SIA1X
<i>USGS I-3765-85 in Water</i>	Solids, total suspended	SIA1X,NELAC,KS-NT

Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2012
KS-NT	Kansas Department of Health and Environment	E-10287	10/30/2012
MO-KC	Missouri Department of Natural Resources	140	04/30/2012
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2012
SIA1X	Iowa Department of Natural Resources	95	02/01/2013

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MEMBER  
ACIL

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1D20125

April 12, 2012  
Page 8 of 9

End of Report

Sue Thompson

Keystone Laboratories, Inc.

Sue Thompson  
Project Manager II

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.*

Phone 641-792-8451

600 East 17th Street South  
Newton, IA 50208

Fax 641-792-7989

# Keystone

LABORATORIES, INC.

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: ID20125



**ACIL**  
MEMBER

April 12, 2012  
Page 9 of 9

CHAIN OF CUSTODY RECORD								
<b>Keystone</b> <b>LABORATORIES, INC.</b>			<b>600 East 17th Street South</b> <b>Newton, IA 50208</b> <b>641-792-8451</b>			Page 1 of 1 Printed: 4/3/2012 7:10:25AM <a href="http://www.keystonelabs.com">www.keystonelabs.com</a>		
<b>SITE INFORMATION</b> Sampler: <i>Pryke</i> Project: Quarterly Waste Pretreatment Pretreatment			<b>REPORT TO</b> Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010			<b>INVOICE TO</b> Accounts Payable Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010		
<b>SPECIAL INSTRUCTIONS</b> None  Turn Around Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH, need by <i>11</i>			<b>LAB USE ONLY</b> Work Order <i>ID20125</i> Temperature Turn-Cooler: No			<input type="checkbox"/> Custody Seal <input type="checkbox"/> Containers Intact <input type="checkbox"/> COC/Labels Agree <input type="checkbox"/> Preservation Confirmed <input type="checkbox"/> Received on Ice		
Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
01-001	Front Parking Lot North Manhole	Water		<i>4/3/12</i>	<i>8:40</i>	—	temperature mo-t-200.7 cbod-5210 cod-t-410.4 do-351.2 flow-total	<i>01</i>
<i>John L. Pryke</i> <i>4/3/12 14:50</i> Relinquished By _____ Date/Time _____			<i>A. Gaylor</i> <i>4/3/12 15:00</i> Received for Lab By _____ Date/Time _____			Remarks: _____		
Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy								

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Phone 641-792-8451

600 East 17th Street South  
Newton, IA 50208

Fax 641-792-7989

# **Test America Analytical Report**

**5/9/12**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: 800-750-2401

TestAmerica Job ID: CVE0700

Client Project/Site: 12-233

Client Project Description: Sauer Danfoss - Ames, Iowa

For:

FEHR-GRAHAM & ASSOCIATES - FREEPORT

221 E. Main Street, Ste. 200

Freeport, IL 61032

Attn: Jeff Ogden



Authorized for release by:

5/25/2012 4:27:56 PM

Derrick Klinkenberg

Organics Manager

[derrick.klinkenberg@testamericainc.com](mailto:derrick.klinkenberg@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CVE0700-01	30127 - 2nd Quarter 2012	Ground Water	05/09/12 10:45	05/09/12 14:28

3

## Detection Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

Client Sample ID: 30127 - 2nd Quarter 2012

Lab Sample ID: CVE0700-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	5.00		1.00		ug/L	1.00		SW 8260B	Total
1,1-Dichloroethene	5.42		2.00		ug/L	1.00		SW 8260B	Total
cis-1,2-Dichloroethene	31.0		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	227		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	19.5		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	9.57		1.00		ug/L	1.00		SW 8260B	Total

4

## Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

**Client Sample ID: 30127 - 2nd Quarter 2012**

Date Collected: 05/09/12 10:45  
Date Received: 05/09/12 14:28

**Lab Sample ID: CVE0700-01**  
Matrix: Ground Water

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
1,1-Dichloroethane	5.00		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
1,1-Dichloroethene	5.42		2.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
cis-1,2-Dichloroethene	31.0		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
Methylene Chloride	<5.00		5.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
Tetrachloroethene	227		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
1,1,1-Trichloroethane	19.5		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
Trichloroethene	9.57		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
Vinyl chloride	<1.00		1.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
Xylenes, total	<3.00		3.00		ug/L		05/10/12 00:00	05/10/12 12:13	1.00
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Dibromofluoromethane	108		75 - 120				05/10/12 00:00	05/10/12 12:13	1.00
Toluene-d8	102		80 - 120				05/10/12 00:00	05/10/12 12:13	1.00
4-Bromofluorobenzene	93		75 - 110				05/10/12 00:00	05/10/12 12:13	1.00

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**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		05/14/12 14:38	05/14/12 14:42	1.00

## Surrogate Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Ground Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVE0700-01	30127 - 2nd Quarter 2012	108	102	93

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

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### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
12E0593-BLK1	Method Blank	106	102	93

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (80-120)
12E0593-BS1	Lab Control Sample	107	103	97
12E0593-MS1	Matrix Spike	118	103	96
12E0593-MSD1	Matrix Spike Duplicate	116	102	93

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

### Method: SW 8260B - Volatile Organic Compounds

**Lab Sample ID:** 12E0593-BLK1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12E0593

**Client Sample ID:** Method Blank

**Prep Type:** Total

**Prep Batch:** 12E0593\_P

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<10.0		10.0	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
1,1-Dichloroethane	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
1,2-Dichloroethane	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
1,1-Dichloroethene	<2.00		2.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
cis-1,2-Dichloroethene	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
trans-1,2-Dichloroethene	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
Methylene Chloride	<5.00		5.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
Tetrachloroethene	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
1,1,1-Trichloroethane	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
1,1,2-Trichloroethane	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
Trichloroethene	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
Vinyl chloride	<1.00		1.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
Xylenes, total	<3.00		3.00	ug/L		05/10/12 00:00	05/10/12 08:29	1.00	
Surrogate	Blank	Blank	Limits			Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier							
Dibromofluoromethane	106		75 - 120			05/10/12 00:00	05/10/12 08:29	1.00	
Toluene-d8	102		80 - 120			05/10/12 00:00	05/10/12 08:29	1.00	
4-Bromofluorobenzene	93		75 - 110			05/10/12 00:00	05/10/12 08:29	1.00	

**Lab Sample ID:** 12E0593-BS1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12E0593

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total

**Prep Batch:** 12E0593\_P

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	
	Added	Result	Qualifier					
Acetone	20.0	25.0		ug/L	125	60 - 150		
1,1-Dichloroethane	20.0	21.6		ug/L	108	60 - 130		
1,2-Dichloroethane	20.0	20.2		ug/L	101	65 - 140		
1,1-Dichloroethene	20.0	20.5		ug/L	102	60 - 135		
cis-1,2-Dichloroethene	20.0	21.4		ug/L	107	70 - 135		
trans-1,2-Dichloroethene	20.0	21.6		ug/L	108	60 - 145		
Methylene Chloride	20.0	22.0		ug/L	110	55 - 145		
Tetrachloroethene	20.0	18.5		ug/L	93	70 - 135		
1,1,1-Trichloroethane	20.0	19.4		ug/L	97	60 - 125		
1,1,2-Trichloroethane	20.0	19.3		ug/L	97	75 - 125		
Trichloroethene	20.0	19.9		ug/L	99	70 - 130		
Vinyl chloride	20.0	20.3		ug/L	102	45 - 135		
Xylenes, total	60.0	62.3		ug/L	104	70 - 130		
Surrogate	LCS	LCS	Limits			%Rec		
	%Recovery	Qualifier						
Dibromofluoromethane	107		75 - 120					
Toluene-d8	103		80 - 120					
4-Bromofluorobenzene	97		80 - 120					

**Lab Sample ID:** 12E0593-MS1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12E0593

**Client Sample ID:** Matrix Spike

**Prep Type:** Total

**Prep Batch:** 12E0593\_P

Analyte	Sample	Sample	Spike	Matrix Spike	Matrix Spike	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Acetone	377		20.0	361	M1	ug/L	-81	45 - 150	

TestAmerica Cedar Falls  
5/25/2012

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

### Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12E0593-MS1

Matrix: Water - NonPotable

Analysis Batch: 12E0593

Client Sample ID: Matrix Spike

Prep Type: Total

Prep Batch: 12E0593\_P

%Rec.

Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	
1,1-Dichloroethane	<0.210		20.0	21.9		ug/L		110	50 - 130
1,2-Dichloroethane	<0.180		20.0	20.1		ug/L		100	55 - 140
1,1-Dichloroethene	0.0200		20.0	21.9		ug/L		109	35 - 135
cis-1,2-Dichloroethene	<0.130		20.0	21.6		ug/L		108	45 - 135
trans-1,2-Dichloroethene	<0.210		20.0	21.5		ug/L		107	45 - 145
Methylene Chloride	0.0900		20.0	22.3		ug/L		111	45 - 145
Tetrachloroethene	0.0400		20.0	18.9		ug/L		94	40 - 135
1,1,1-Trichloroethane	0.0100		20.0	18.8		ug/L		94	40 - 125
1,1,2-Trichloroethane	0.0200		20.0	21.4		ug/L		107	60 - 130
Trichloroethene	<0.190		20.0	19.6		ug/L		98	50 - 130
Vinyl chloride	<0.100		20.0	16.4		ug/L		82	30 - 135
Xylenes, total	1.47		60.0	64.3		ug/L		105	40 - 135
<hr/>									
<b>Surrogate</b>									
	<b>Matrix Spike %Recovery</b>	<b>Matrix Spike Qualifier</b>		<b>Limits</b>					
Dibromofluoromethane	118			75 - 120					
Toluene-d8	103			80 - 120					
4-Bromofluorobenzene	96			80 - 120					

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Lab Sample ID: 12E0593-MSD1

Matrix: Water - NonPotable

Analysis Batch: 12E0593

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total

Prep Batch: 12E0593\_P

%Rec.

RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acetone	377		20.0	357	M1	ug/L		-103	45 - 150	1	35
1,1-Dichloroethane	<0.210		20.0	21.8		ug/L		109	50 - 130	0.4	25
1,2-Dichloroethane	<0.180		20.0	20.4		ug/L		102	55 - 140	1	15
1,1-Dichloroethene	0.0200		20.0	21.7		ug/L		109	35 - 135	0.7	30
cis-1,2-Dichloroethene	<0.130		20.0	22.2		ug/L		111	45 - 135	3	20
trans-1,2-Dichloroethene	<0.210		20.0	20.8		ug/L		104	45 - 145	3	35
Methylene Chloride	0.0900		20.0	23.0		ug/L		115	45 - 145	3	30
Tetrachloroethene	0.0400		20.0	18.6		ug/L		93	40 - 135	2	20
1,1,1-Trichloroethane	0.0100		20.0	18.8		ug/L		94	40 - 125	0.4	20
1,1,2-Trichloroethane	0.0200		20.0	20.0		ug/L		100	60 - 130	7	15
Trichloroethene	<0.190		20.0	19.9		ug/L		100	50 - 130	2	20
Vinyl chloride	<0.100		20.0	16.6		ug/L		83	30 - 135	1	20
Xylenes, total	1.47		60.0	62.7		ug/L		102	40 - 135	3	20
<hr/>											
<b>Surrogate</b>											
	<b>Matrix Spike Dup %Recovery</b>	<b>Matrix Spike Dup Qualifier</b>		<b>Limits</b>							
Dibromofluoromethane	116			75 - 120							
Toluene-d8	102			80 - 120							
4-Bromofluorobenzene	93			80 - 120							

## QC Association Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

### GCMS Volatiles

#### Analysis Batch: 12E0593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E0593-BLK1	Method Blank	Total	Water - NonPotable	SW 8260B	12E0593_P
12E0593-BS1	Lab Control Sample	Total	Water - NonPotable	SW 8260B	12E0593_P
12E0593-MS1	Matrix Spike	Total	Water - NonPotable	SW 8260B	12E0593_P
12E0593-MSD1	Matrix Spike Duplicate	Total	Water - NonPotable	SW 8260B	12E0593_P
CVE0700-01	30127 - 2nd Quarter 2012	Total	Ground Water	SW 8260B	12E0593_P

#### Analysis Batch: 12E0726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVE0700-01	30127 - 2nd Quarter 2012	Total	Ground Water	SW 9041A	12E0726_P

#### Prep Batch: 12E0593\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E0593-BLK1	Method Blank	Total	Water - NonPotable	SW 5030B	
12E0593-BS1	Lab Control Sample	Total	Water - NonPotable	SW 5030B	
12E0593-MS1	Matrix Spike	Total	Water - NonPotable	SW 5030B	
12E0593-MSD1	Matrix Spike Duplicate	Total	Water - NonPotable	SW 5030B	
CVE0700-01	30127 - 2nd Quarter 2012	Total	Ground Water	SW 5030B	

#### Prep Batch: 12E0726\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVE0700-01	30127 - 2nd Quarter 2012	Total	Ground Water	Default Prep VOC	

## Lab Chronicle

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

Client Sample ID: 30127 - 2nd Quarter 2012

Date Collected: 05/09/12 10:45

Date Received: 05/09/12 14:28

Lab Sample ID: CVE0700-01

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	12E0593_P	05/10/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12E0593	05/10/12 12:13	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12E0726_P	05/14/12 14:38	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12E0726	05/14/12 14:42	FMK	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

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## Definitions/Glossary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT

TestAmerica Job ID: CVE0700

Project/Site: 12-233

### Qualifiers

#### GCMS Volatiles

Qualifier	Qualifier Description
M1	The MS and/or MSD were outside control limits.

### Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

☒	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Certification Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Cedar Falls	AIHA - LAP	IHLAP		101044
TestAmerica Cedar Falls	Illinois	NELAC	5	200024
TestAmerica Cedar Falls	Iowa	State Program	7	7
TestAmerica Cedar Falls	Kansas	NELAC	7	E-10341
TestAmerica Cedar Falls	Minnesota	NELAC	5	019-999-319
TestAmerica Cedar Falls	North Dakota	State Program	8	R-186
TestAmerica Cedar Falls	Oregon	NELAC	10	IA100001
TestAmerica Cedar Falls	Wisconsin	State Program	5	999917270

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

## Method Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVE0700

Method	Method Description	Protocol	Laboratory
SW 8260B	Volatile Organic Compounds		TAL CF
SW 9041A	VOC Preservation Check		TAL CF

**Protocol References:**

**Laboratory References:**

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

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Sauer Danfoss – Ames Iowa  
TA Work Order #CVE0700

### Case Narrative

TestAmerica – Cedar Falls received two samples on May 9, 2012 on ice. Requested analysis were for 8260 Volatiles, Sulfate, and 1,4-Dioxane by 8260 SIM.

Sample ID		Date	
Field	Lab ID	Collected	Received
30127 – 2 <sup>nd</sup> Quarter 2012	CVE0700-01	05/09/12 1045	05/09/12 1428

#### 8260 Volatiles (Batch #12E0593)

Method Blank – No detections of target compounds.

Laboratory Control Sample (LCS) – No deviations

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) – The MS and MSD was above laboratory acceptance criteria for Acetone. Source sample for the MS-MSD was not apart of this SDG.

Sample surrogates – No deviations

Sample Dilutions – No dilutions

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TestAmerica Cedar Falls  
704 Enterprise Drive

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

### Chain of Custody Record

Cedar Falls, IA 50613  
phone 319.277.2401 fax 319.277.2425

TestAmerica Laboratories, Inc.

COC No:

of COCs

Job No.

12-233

SDG No.

Sampler: Jason Miller

Sample Specific Notes:

Page 15 of 16

Client Contact		Project Manager: Kent Thompson		Site Contact:		Date:	COC No:
Fehr-Graham 221 East Main Street Freeport, IL 61032 815-235-7643 815-235-4632 Project Name: Sauer-Ames (12-233)		Tel/Fax: 815 235-7643		Lab Contact:		Carrier:	of COCs
		Analysis Turnaround Time					
		Calendar (C) or Work Days (W) Standard					
		TAT if different from Below					
		<input type="checkbox"/> 2 weeks					
		<input type="checkbox"/> 1 week					
		<input type="checkbox"/> 2 days					
		<input type="checkbox"/> 1 day					
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs Method 8260
30127 - 2nd Quarter 2012		5/7	10:45	Gel	WW	38	X
<p>Preservation Used: 1=Ice, 2=HCl; 3=H<sub>2</sub>SO<sub>4</sub>; 4=HNO<sub>3</sub>; 5=NaOH; 6= Other _____</p> <p>Possible Hazard Identification</p> <p><input type="checkbox"/> Non-Hazard    <input type="checkbox"/> Flammable    <input type="checkbox"/> Skin Irritant    Poison B    <input type="checkbox"/> Unknown    <input type="checkbox"/></p> <p>Special Instructions/QC Requirements &amp; Comments: Please send report to aschneiderman@ehr-graham.com</p>							
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client    <input type="checkbox"/> Disposal By Lab    <input type="checkbox"/> Archive For _____ Months</p>							
Relinquished by: <i>Jason Miller</i>	Company: FCA	Date/Time: 5/7 2:30	Received by: <i>JL</i>	Company: TestAmerica	Date/Time: 5/9/12 14:28		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:		

5/25/2012

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613  
800-750-2401 • 319-277-2425 FAX

## Sample Receipt and Temperature Log Form

Client: Feh. Graham

Project: Sauer-Aimes

City: Freeport, IL

Date: 5/9/12 Receiver's Initials: JL Time (Delivered): 2:28

### Temperature Record:

<b>Cooler ID# (If Applicable)</b>
<u>C/ent</u>
<u>      °C / On Ice</u>

Temp Blank

Temperature out of compliance

### Thermometer:

- IR - 111531565 'D'
- IR - 111531506 'E'
- IR - 61854108 'Front'
- 101681126

### Courier:

- UPS
- TA Courier
- FedEx
- TA Field Services
- FedEx Ground
- Client
- US Postal Service
- Other
- Spee-Dee

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Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

- Sample(s) not received in a cooler.
- Samples(s) received same day of sampling.
- Evidence of a chilling process
- No Temp. Blank. Inside temperature of cooler recorded.
- Temperature not taken:

\*Refer to SOP CF-SS-01 for Temperature Criteria

**FEHR GRAHAM**  
ENGINEERING & ENVIRONMENTAL

**FILE COPY**

UPS Overnight Tracking Number: 1Z 651 395 01 5138 9172

October 3, 2012

Mr. Gary Erickson  
Sauer-Danfoss (US) Company  
2800 East 13<sup>th</sup> Street  
Ames, IA 50010

**RE: Non-Domestic Waste Pretreatment Program Quarterly Report – 3rd Quarter 2012**

Dear Mr. Erickson:

Enclosed please find three copies of the above-referenced documents. Please review for completeness and accuracy. If satisfactory sign and date where indicated. The original set, along with the enclosed cover letter, should be forwarded to the Water and Pollution Control Department for the City of Ames. For your convenience, certified mailing labels are enclosed. Please retain two additional copies and I will file when next on-site.

**A hardcopy of the entire report must be received by the City of Ames no later than October 10, 2012.**

Please note that the sample collected August 8, 2012, returned violations for TSS of 2,580 mg/L with a permit limit of 1,600 mg/L, COD of 6,000 mg/L with a permit limit of 2,700 mg/L and pH of 5.5 s.u. with a permit range of 6.0 to 10.0 s.u. An additional sample collected on August 29, 2012, returned results below the permitted limits. These results were submitted to the City of Ames, on September 13, 2012.

If you have any questions regarding the enclosed documents, please do not hesitate to contact this office.

Sincerely,



Jason Miller, CHMM  
Environmental Specialist

JM:nls

O:\Sauer-Danfoss, Inc\12-313\Final\JM12-313-3rd Qtr Wastewater.docx  
Enclosure

CERTIFIED MAIL NUMBER: 7008 0150 0001 0181 5492  
RETURN RECEIPT REQUESTED

October 5, 2012

City of Ames, Iowa  
Water and Pollution Control Department  
300 East Fifth Street, Building 1  
Ames, IA 50010

**RE: Non-Domestic Waste Pretreatment Program Quarterly Report – 3rd Quarter 2012**  
**Sauer-Danfoss (US) Company**  
**2800 East 13<sup>th</sup> Street**  
**Ames, IA 50010**  
**Facility Permit No. 6593-9**

Dear Sir/Madam:

Enclosed, please find the Non-Domestic Waste Pretreatment Program Quarterly Report for wastewater discharge from the above-referenced facility for the 3rd quarter of 2012. Also enclosed are copies of the analytical reports from Keystone Labs and Test America for the analysis of wastewater and groundwater remediation respectively and a summary of monthly flow in gals/month from the groundwater remediation project.

Please note that the sample collected August 8, 2012, returned violations for TSS of 2,580 mg/L with a permit limit of 1,600 mg/L, COD of 6,000 mg/L with a permit limit of 2,700 mg/L and pH of 5.5 s.u. with a permit range of 6.0 to 10.0 s.u. An additional sample collected on August 29, 2012, returned results below the permitted limits. These results were submitted to the City of Ames, on September 13, 2012.

Should you have any questions regarding these documents, please do not hesitate to contact this office.

Sincerely,



Jason Miller, CHMM  
Environmental Specialist

JM:nls  
0:\Sauer-Danfoss, Inc\12-313\Final\JM12-313-3rd Qtr Wastewater.docx  
Enclosure

cc: Sauer-Danfoss (w/enc.)

Non-Domestic Waste Pretreatment Program  
Quarterly Report  
(Non-Significant, Non-Domestic Contributor)

3rd Quarter 2012

Reporting Period: 7/1/2012 to 9/30/2012

Submit results on or before the 10th of the month following the end of the quarter

Facility: Sauér-Danfoss  
Permit No: 6593-9  
Facility Contact: Gary Erickson  
Facility Phone No: 515-239-6000  
Sampling Location: Front Parking Lot North Manhole (Wastewater)/On-Site Wastewater Treatment  
Sample Port (GW Remediation)  
Sample Type: Grab & 24 Hour Composite  
Sample Date: 8/15/12 (GW Remediation)/ 8/8/12 (Wastewater)

Analyte	Permit Limit Mg/L	Sample Results Mg/L
Facility	Sauer Danfoss 2800 East 13th	Sauer Danfoss 2800 East 13th
Flow	Gals/Day	28,710
pH	6-10 pH	5.50
TSS	1,600	2,580
Cyanide	0.88	<0.007
Ammonia (NH3)	225	40.3
Total Kjeldahl Nitrogen (TKN)	280	79.7
Oil & Grease	300	120
CBOD 5	1,800	1,250
COD	2,700	6,000
Molybdenum	0.29	0.014
GW remediation		Max Expected Concentration ug/L
Flow (remediation)	Gals/Qtr	16,215
Acetone	44	<10
1,1-Dichloroethane	370	6.99
1,1-Dichloroethene	170	7.86
cis- 1,2-Dichloroethene	490	51.6
Tetrachloroethene	1700	369
1,1,1-Trichloroethane	650	34.7
Trichloroethene	110	16.20
Total Xylenes	11	<3.0

Note: Please attach sample results from Laboratory

Process or Treatment Change: None

Additional Comments: Please see attached for Groundwater Remediation Flow Data.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed \_\_\_\_\_  
Authorized Representative

Date \_\_\_\_\_

Sauer-Danfoss  
Ames, IA  
Groundwater Remediation Flow Data

July 2012	14,203
August 2012	0
September 2012	2,012
Total flow (gals) 3rd Quarter:	16,215
	176 gpd

# of days in Quarter =

92

# **Keystone Analytical Report**

**8/8/12**

## ANALYTICAL REPORT

August 21, 2012

Work Order: 1H20417

Page 1 of 8

Report To
Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010

Work Order Information
Date Received: 08/08/2012 12:05PM Collector: Phone: (515) 239-6539 PO Number: 4501784596

Project : Quarterly Waste Pretreatment

Project Number: Pretreatment

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1H20417-01	Front Parking Lot North Manhole			Matrix:Water		Collected:	08/08/12 08:50
CBOD (5 day)	1250 mg/L	4	IVH0296	SM 5210 B	JRP	08/09/12 7:38	
Cyanide, total	<0.007 mg/L	0.007	IVH0474	4500CN-E	SAI	08/15/12 16:30	
Chemical Oxygen Demand	6000 mg/L	1000	IVH0300	EPA 410.4	SAI	08/09/12 14:16	
Nitrogen, Ammonia	40.3 mg/L	1.0	IVH0278	SM 4500-NH3 B,E	JDK	08/08/12 15:24	
Oil/Grease, animal/vegetable	119 mg/L	4	IVH0589	EPA 1664	DMC	08/17/12 14:18	
Oil/Grease, petroleum	<4 mg/L	4	IVH0589	EPA 1664	DMC	08/17/12 14:18	
Oil and Grease	120 mg/L	4	IVH0589	EPA 1664	DMC	08/17/12 14:18	
Nitrogen, Kjeldahl, total	79.7 mg/L	10.0	IVH0325	EPA 351.2	DMC	08/10/12 17:36	
Solids, total suspended	2580 mg/L	40	IVH0376	USGS I-3765-85	MID	08/10/12 15:09	
Molybdenum, total	0.014 mg/L	0.010	IVH0310	EPA 200.7	DRB	08/09/12 17:44	
Flow	28710 Gallons	1.0000	IVH0299	Flow	JRP	08/08/12 8:55	
pH	5.5 pH	0.5	IVH0299	SM 4500 H+ B	JRP	08/08/12 8:55	
Temperature	22.9 °C	0.00	IVH0299	SM 2550 B	JRP	08/08/12 8:55	

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1H20417

August 21, 2012  
Page 2 of 8

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VH0278 - Wet Chem Preparation</b>										
<b>Blank (1VH0278-BLK1)</b>										
Nitrogen, Ammonia										
	ND		1.0 mg/L							Prepared & Analyzed: 08/08/12
<b>LCS (1VH0278-BS1)</b>										
Nitrogen, Ammonia										
	9.8		1.0 mg/L		10.0000		98.0			Prepared & Analyzed: 08/08/12
<b>Matrix Spike (1VH0278-MS1)</b>										
Nitrogen, Ammonia										
	11.3		1.0 mg/L		10.0000	1.0	104			Prepared & Analyzed: 08/08/12
<b>Matrix Spike Dup (1VH0278-MSD1)</b>										
Nitrogen, Ammonia										
	11.6		1.0 mg/L		10.0000	1.0	106	85-110	2.44	10
<b>Reference (1VH0278-SRM1)</b>										
Nitrogen, Ammonia										
	10.1		1.0 mg/L		10.0000		101			Prepared & Analyzed: 08/08/12
<b>Batch 1VH0296 - General Prep Micro</b>										
<b>Blank (1VH0296-BLK1)</b>										
CBOD (5 day)										
	ND		4 mg/L							Prepared & Analyzed: 08/09/12
<b>Duplicate (1VH0296-DUP1)</b>										
CBOD (5 day)										
	245		4 mg/L		300				20.2	30
<b>Duplicate (1VH0296-DUP2)</b>										
CBOD (5 day)										
	39.0		4 mg/L							Prepared & Analyzed: 08/09/12
<b>Reference (1VH0296-SRM1)</b>										
CBOD (5 day)										
	184		4 mg/L		198.000		92.9	84.6-115.4		Prepared & Analyzed: 08/09/12

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

August 21, 2012  
Page 3 of 8

Work Order: **1H20417**

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1VH0300 - Wet Chem Preparation**

<b>Blank (1VH0300-BLK1)</b>	Prepared & Analyzed: 08/09/12								
Chemical Oxygen Demand	ND	10	mg/L						
<b>LCS (1VH0300-BS1)</b>	Prepared & Analyzed: 08/09/12								
Chemical Oxygen Demand	78.5	10	mg/L	76.5000	103	81-120			
<b>Matrix Spike (1VH0300-MS1)</b>	Source: 1H20358-01 Prepared & Analyzed: 08/09/12								
Chemical Oxygen Demand	710	100	mg/L	382.500	341	96.6	60-140		
<b>Matrix Spike Dup (1VH0300-MSD1)</b>	Source: 1H20358-01 Prepared & Analyzed: 08/09/12								
Chemical Oxygen Demand	785	100	mg/L	382.500	341	116	60-140	10.1	26

**Batch 1VH0325 - Wet Chem Preparation**

<b>Blank (1VH0325-BLK1)</b>	Prepared: 08/09/12 Analyzed: 08/10/12						
Nitrogen, Kjeldahl, total	ND	0.50	mg/L				
<b>Blank (1VH0325-BLK2)</b>	Prepared: 08/09/12 Analyzed: 08/10/12						
Nitrogen, Kjeldahl, total	ND	0.50	mg/L				
<b>LCS (1VH0325-BS1)</b>	Prepared: 08/09/12 Analyzed: 08/10/12						
Nitrogen, Kjeldahl, total	20.0	0.50	mg/L	20.0000	99.8	82-114	
<b>LCS (1VH0325-BS2)</b>	Prepared: 08/09/12 Analyzed: 08/10/12						
Nitrogen, Kjeldahl, total	19.8	0.50	mg/L	20.0000	99.1	82-114	
<b>Matrix Spike (1VH0325-MS1)</b>	Source: 1H20315-03 Prepared: 08/09/12 Analyzed: 08/10/12						
Nitrogen, Kjeldahl, total	20.0	0.50	mg/L	10.0000	9.70	103	76-123

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1H20417

August 21, 2012

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**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VH0325 - Wet Chem Preparation</b>										
Matrix Spike (1VH0325-MS2)		Source: 1H20315-04			Prepared: 08/09/12 Analyzed: 08/10/12					
Nitrogen, Kjeldahl, total	21.4	0.50	mg/L		10.0000	11.5	98.4	76-123		
Matrix Spike Dup (1VH0325-MSD1)		Source: 1H20315-03			Prepared: 08/09/12 Analyzed: 08/10/12					
Nitrogen, Kjeldahl, total	19.6	0.50	mg/L		10.0000	9.70	98.8	76-123	2.04	11
Matrix Spike Dup (1VH0325-MSD2)		Source: 1H20315-04			Prepared: 08/09/12 Analyzed: 08/10/12					
Nitrogen, Kjeldahl, total	21.8	0.50	mg/L		10.0000	11.5	102	76-123	1.78	11
<b>Batch 1VH0376 - Wet Chem Preparation</b>										
Blank (1VH0376-BLK1)					Prepared & Analyzed: 08/10/12					
Solids, total suspended	ND	1	mg/L							
LCS (1VH0376-BS1)					Prepared & Analyzed: 08/10/12					
Solids, total suspended	12.9	1	mg/L		15.0000		86.0	72-110		
Duplicate (1VH0376-DUP1)		Source: 1H20413-05			Prepared & Analyzed: 08/10/12					
Solids, total suspended	3420	100	mg/L			3410			0.293	17
<b>Batch 1VH0474 - Wet Chem Preparation</b>										
Blank (1VH0474-BLK1)					Prepared & Analyzed: 08/15/12					
Cyanide, total	ND	0.007	mg/L							
LCS (1VH0474-BS1)					Prepared & Analyzed: 08/15/12					
Cyanide, total	0.019	0.007	mg/L		0.0200000		93.8	77-125		

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

August 21, 2012  
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Work Order: 1H20417

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VH0474 - Wet Chem Preparation</b>										
<b>Matrix Spike (1VH0474-MS1)</b> Source: 1H20640-01      Prepared & Analyzed: 08/15/12										
Cyanide, total	0.088	0.007	mg/L	0.0200000	0.070	90.8	79-127			
<b>Matrix Spike Dup (1VH0474-MSD1)</b> Source: 1H20640-01      Prepared & Analyzed: 08/15/12										
Cyanide, total	0.089	0.007	mg/L	0.0200000	0.070	99.1	79-127	1.85	11	
<b>Batch 1VH0589 - Wet Chem Preparation</b>										
<b>Blank (1VH0589-BLK1)</b> Prepared & Analyzed: 08/17/12										
Oil and Grease	ND	4	mg/L							
Oil/Grease, animal/vegetable	ND	4	"							
Oil/Grease, petroleum	ND	4	"							
<b>LCS (1VH0589-BS1)</b> Prepared & Analyzed: 08/17/12										
Oil and Grease	36	4	mg/L	40.0000		89.5	78-114			
Oil/Grease, animal/vegetable	20	4	"	20.0000		98.5	64-132			
Oil/Grease, petroleum	16	4	"	20.0000		80.5	64-132			
<b>Matrix Spike (1VH0589-MS1)</b> Source: 1H20422-01      Prepared & Analyzed: 08/17/12										
Oil and Grease	41	4	mg/L	40.0000	3	93.9	78-114			
Oil/Grease, animal/vegetable	24	4	"	20.0000	3	106	64-132			
Oil/Grease, petroleum	17	4	"	20.0000	ND	83.4	64-132			
<b>Matrix Spike Dup (1VH0589-MSD1)</b> Source: 1H20422-01      Prepared & Analyzed: 08/17/12										
Oil and Grease	41	4	mg/L	40.0000	3	95.0	78-114	0.994	18	
Oil/Grease, animal/vegetable	24	4	"	20.0000	3	107	64-132	0.504	34	
Oil/Grease, petroleum	17	4	"	20.0000	ND	84.8	64-132	1.70	34	

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1H20417

August 21, 2012  
Page 6 of 8

**Determination of Total Metals - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VH0310 - EPA 3010A Digestion (Water)</b>										
<b>Blank (1VH0310-BLK1)</b>										
Molybdenum, total	ND	0.010	mg/L				Prepared & Analyzed: 08/09/12			
<b>LCS (1VH0310-BS1)</b>										
Molybdenum, total	0.210	0.010	mg/L	0.200000		105	85-115			
<b>Matrix Spike (1VH0310-MS1)</b>										
Molybdenum, total	0.213	0.010	mg/L	0.200000	0.00486	104	70-130			
<b>Matrix Spike Dup (1VH0310-MSD1)</b>										
Molybdenum, total	0.209	0.010	mg/L	0.200000	0.00486	102	70-130	1.98	20	
<b>Post Spike (1VH0310-PS1)</b>										
Molybdenum, total	0.220		mg/L	0.200000	0.00477	107	85-115			

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

August 21, 2012  
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Work Order: 1H20417

**Certified Analyses included in this Report**

Method/Matrix	Analyte	Certifications
<i>4500CN-E in Water</i>	Cyanide, total	KS-NT,NELAC,SIA1X
<i>EPA 1864 in Water</i>	Oil and Grease	KS-NT,NELAC,SIA1X
	Oil/Grease, animal/vegetable	KS-NT,NELAC,SIA1X
	Oil/Grease, petroleum	KS-NT,NELAC,SIA1X
<i>EPA 200.7 in Water</i>	Molybdenum, total	NELAC,SIA1X,KS-NT
<i>EPA 351.2 in Water</i>	Nitrogen, Kjeldahl, total	SIA1X,NELAC,KS-KC
<i>EPA 410.4 in Water</i>	Chemical Oxygen Demand	KS-NT,NELAC,SIA1X
<i>SM 2550 B in Water</i>	Temperature	SIA1X
<i>SM 4500-NH3 B,E in Water</i>	Nitrogen, Ammonia	KS-NT,NELAC,SIA1X
<i>SM 5210 B in Water</i>	CBOD (5 day)	SIA1X
<i>USGS I-3785-85 in Water</i>	Solids, total suspended	SIA1X,NELAC,KS-NT

Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2013
KS-NT	Kansas Department of Health and Environment	E-10287	10/30/2012
MO-KC	Missouri Department of Natural Resources	140	04/30/2013
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2013
SIA1X	Iowa Department of Natural Resources	95	02/01/2013

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MEMBER  
ACIL

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1H20417

August 21, 2012  
Page 8 of 8

End of Report

Sue Thompson

Keystone Laboratories, Inc.

Sue Thompson  
Project Manager II

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Phone 641-792-8451

600 East 17th Street South  
Newton, IA 50208

Fax 641-792-7989

# **Keystone Analytical Report**

**8/29/12**



## ANALYTICAL REPORT

Work Order: 1H21626

September 06, 2012

Page 1 of 4

Report To
Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010

Work Order Information
Date Received: 08/29/2012 8:50AM Collector: Unknown Phone: (515) 239-6539 PO Number: 4501784596

Project : Quarterly Waste Pretreatment  
Project Number: Pretreatment

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1H21626-01	Front Parking Lot North Manhole			Matrix:Water		Collected:	08/29/12 07:35
Chemical Oxygen Demand	936 mg/L	100	IVI0050	EPA 410.4	DMC	09/04/12 15:42	
Solids, total suspended	716 mg/L	20	IVH1080	USGS I-3765-85	MID	08/31/12 14:32	
Flow	21630 Gallons	1.0000	IVH0958	Flow	JRP	08/29/12 7:35	
pH	8.0 pH	0.5	IVH0958	SM 4500 H+ B	JRP	08/29/12 7:35	

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

September 06, 2012  
Page 2 of 4

Work Order: 1H21626

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1VH1080 - Wet Chem Preparation**

<b>Blank (1VH1080-BLK1)</b>	Prepared & Analyzed: 08/31/12									
Solids, total suspended	ND	1	mg/L							
<b>LCS (1VH1080-BS1)</b>	Prepared & Analyzed: 08/31/12									
Solids, total suspended	13.9	1	mg/L	15.0000	92.7	72-110				
<b>Duplicate (1VH1080-DUP1)</b>	Source: 1H21620-05 Prepared & Analyzed: 08/31/12									
Solids, total suspended	3120	100	mg/L	3140	0.639	17				

**Batch 1VI0050 - Wet Chem Preparation**

<b>Blank (1VI0050-BLK1)</b>	Prepared & Analyzed: 09/04/12									
Chemical Oxygen Demand	ND	10	mg/L							
<b>LCS (1VI0050-BS1)</b>	Prepared & Analyzed: 09/04/12									
Chemical Oxygen Demand	78.9	10	mg/L	76.5000	103	81-120				
<b>Matrix Spike (1VI0050-MS1)</b>	Source: 1H21735-01 Prepared & Analyzed: 09/04/12									
Chemical Oxygen Demand	227	40	mg/L	153.000	57.5	111	60-140			
<b>Matrix Spike Dup (1VI0050-MSD1)</b>	Source: 1H21735-01 Prepared & Analyzed: 09/04/12									
Chemical Oxygen Demand	219	40	mg/L	153.000	57.5	105	60-140	3.95	26	

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

**Certified Analyses included in this Report**

Method/Matrix	Analyte	Certifications
<b>EPA 410.4 in Water</b>	Chemical Oxygen Demand	KS-NT,NELAC,SIA1X
<b>USGS I-3785-85 in Water</b>	Solids, total suspended	SIA1X,NELAC,KS-NT

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MEMBER  
ACIL

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1H21626

September 06, 2012  
Page 3 of 4

Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2013
KS-NT	Kansas Department of Health and Environment	E-10287	10/30/2012
MO-KC	Missouri Department of Natural Resources	140	04/30/2013
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2013
SIA1X	Iowa Department of Natural Resources	95	02/01/2013

End of Report

Keystone Laboratories, Inc.

Sue Thompson  
Project Manager II

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Phone 641-792-8451

600 East 17th Street South  
Newton, IA 50208

Fax 641-792-7989

# Keystone

LABORATORIES, INC.

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1H21626

September 06, 2012  
Page 4 of 4



**ACIL**  
MEMBER

**CHAIN OF CUSTODY RECORD**

Page 1 of 1  
Printed: 8/22/2012 8:58:21AM  
[www.keystonelabs.com](http://www.keystonelabs.com)

<b>Keystone</b> LABORATORIES, INC.		600 East 17th Street South Newton, IA 50208 641-792-8451						
<b>SITE INFORMATION</b>		<b>REPORT TO</b>						
Sampler: Project: Quarterly Waste Pretreatment Pretreatment		Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010						
<b>SPECIAL INSTRUCTIONS</b>		<b>INVOICE TO</b> Accounts Payable Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010						
None  Turn Around Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH, need by <u>1/1/</u>		<b>LAB USE ONLY</b> Work Order <u>1H21626</u> Temperature Turn-Cooler: No						
		<input type="checkbox"/> Custody Seal <input type="checkbox"/> Containers Intact <input type="checkbox"/> COC/Labels Agree <input type="checkbox"/> Preservation Confirmed <input type="checkbox"/> Received on Ice						
Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
01-001	Front Parking Lot North Manhole	Water		<u>8/29/12</u>	<u>7:35</u>	—	temperature mdo-4500b mdo-4500b ph-field-4500 ws-i-3763-85	-profile-1664- chd-5310- cod-410.4 dm-244-9- flow-total  <u>01</u>
Relinquished By <u>Jean R. Pfeifer</u> Date/Time <u>8/29/12 8:00</u> Received By <u>W. F. Pfeifer</u> Date/Time <u>8/29/13 8:50</u>						Remarks: <small>Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy</small>		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

Phone 641-792-8451

600 East 17th Street South  
Newton, IA 50208

Fax 641-792-7989

**Test America Analytical Report**

**8/15/12**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: 800-750-2401

TestAmerica Job ID: CVH1006

Client Project/Site: 12-233

Client Project Description: Sauer Danfoss - Ames, Iowa

For:

FEHR-GRAHAM & ASSOCIATES - FREEPORT

221 E. Main St., Ste. 200

Freeport, IL 61032

Attn: Amy Schneiderman



Authorized for release by:

8/27/2012 10:47:13 AM

Derrick Klinkenberg

Organics Manager

derrick.klinkenberg@testamericainc.com

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVH1006

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CVH1006-01	30515 - 3rd Quarter	Ground Water	08/15/12 09:30	08/15/12 13:49

## Detection Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVH1006

Client Sample ID: 30515 - 3rd Quarter

Lab Sample ID: CVH1006-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	6.99		1.00		ug/L	1.00		SW 8260B	Total
1,1-Dichloroethene	7.86		2.00		ug/L	1.00		SW 8260B	Total
cis-1,2-Dichloroethene	51.6		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	369		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	34.7	CIN	1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	16.2		1.00		ug/L	1.00		SW 8260B	Total

## Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 12-233

TestAmerica Job ID: CVH1006

**Client Sample ID:** 30515 - 3rd Quarter

**Lab Sample ID:** CVH1006-01

Matrix: Ground Water

Date Collected: 08/15/12 09:30  
 Date Received: 08/15/12 13:49  
 Sampler Name: Jason Miller

Sampler Phone Number: (815) 235-7643

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### Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
1,1-Dichloroethane	6.99		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
1,1-Dichloroethene	7.86		2.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
cis-1,2-Dichloroethene	51.6		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
Methylene Chloride	<5.00		5.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
Tetrachloroethene	369		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
1,1,1-Trichloroethane	34.7 CIN		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
Trichloroethene	16.2		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
Vinyl chloride	<1.00 C9		1.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
Xylenes, total	<3.00		3.00		ug/L		08/16/12 00:00	08/16/12 12:31	1.00
<b>Surrogate</b>		%Recovery	Qualifier	Limits			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane		97		75 - 120			08/16/12 00:00	08/16/12 12:31	1.00
Toluene-d8		96		80 - 120			08/16/12 00:00	08/16/12 12:31	1.00
4-Bromofluorobenzene		103		75 - 110			08/16/12 00:00	08/16/12 12:31	1.00

### Method: SW 9041A - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		08/20/12 15:30	08/20/12 15:35	1.00

## Surrogate Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVH1006

### Method: SW 8260B - Volatile Organic Compounds Matrix: Ground Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVH1006-01	30515 - 3rd Quarter	97	96	103

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

### Method: SW 8260B - Volatile Organic Compounds Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
12H0789-BLK1	Method Blank	96	95	104

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

### Method: SW 8260B - Volatile Organic Compounds Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (80-120)
12H0789-BS1	Lab Control Sample	97	96	103
12H0789-MS1	30515 - 3rd Quarter	98	97	105
12H0789-MSD1	30515 - 3rd Quarter	98	95	100

**Surrogate Legend**

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 12-233

TestAmerica Job ID: CVH1006

### Method: SW 8260B - Volatile Organic Compounds

**Lab Sample ID:** 12H0789-BLK1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12H0789

**Client Sample ID:** Method Blank

**Prep Type:** Total

**Prep Batch:** 12H0789\_P

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<10.0		10.0		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
Methylene Chloride	<5.00		5.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
Tetrachloroethene	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
1,1,1-Trichloroethane	<1.00 CIN		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
Trichloroethene	<1.00		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
Vinyl chloride	<1.00 C9		1.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
Xylenes, total	<3.00		3.00		ug/L		08/16/12 00:00	08/16/12 12:06	1.00
Surrogate	Blank	Blank	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
Dibromofluoromethane	96		75 - 120	08/16/12 00:00	08/16/12 12:06	1.00			
Toluene-d8	95		80 - 120	08/16/12 00:00	08/16/12 12:06	1.00			
4-Bromofluorobenzene	104		75 - 110	08/16/12 00:00	08/16/12 12:06	1.00			

**Lab Sample ID:** 12H0789-BS1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12H0789

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total

**Prep Batch:** 12H0789\_P

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits
	Added	Result	Qualifier				
Acetone	20.0	22.7		ug/L		114	60 - 150
1,1-Dichloroethane	20.0	19.2		ug/L		96	60 - 130
1,2-Dichloroethane	20.0	20.0		ug/L		100	65 - 140
1,1-Dichloroethene	20.0	18.2		ug/L		91	60 - 135
cis-1,2-Dichloroethene	20.0	20.0		ug/L		100	70 - 135
trans-1,2-Dichloroethene	20.0	19.7		ug/L		99	60 - 145
Methylene Chloride	20.0	19.2		ug/L		96	55 - 145
Tetrachloroethene	20.0	20.7		ug/L		104	70 - 135
1,1,1-Trichloroethane	20.0	22.0 CIN		ug/L		110	60 - 125
1,1,2-Trichloroethane	20.0	21.2		ug/L		106	75 - 125
Trichloroethene	20.0	20.9		ug/L		105	70 - 130
Vinyl chloride	20.0	18.8 C9		ug/L		94	45 - 135
Xylenes, total	60.0	64.6		ug/L		108	70 - 130
Surrogate	LCS	LCS	Limits	Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier					
Dibromofluoromethane	97		75 - 120	08/16/12 00:00	08/16/12 12:06	1.00	
Toluene-d8	96		80 - 120	08/16/12 00:00	08/16/12 12:06	1.00	
4-Bromofluorobenzene	103		80 - 120	08/16/12 00:00	08/16/12 12:06	1.00	

**Lab Sample ID:** 12H0789-MS1

**Matrix:** Water - NonPotable

**Analysis Batch:** 12H0789

**Client Sample ID:** 30515 - 3rd Quarter

**Prep Type:** Total

**Prep Batch:** 12H0789\_P

Analyte	Sample	Sample	Spike	Matrix Spike	Matrix Spike	Unit	D	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier				
Acetone	<10.0		20.0	15.5		ug/L		75	45 - 150

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVH1006

### Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12H0789-MS1

Matrix: Water - NonPotable

Analysis Batch: 12H0789

Client Sample ID: 30515 - 3rd Quarter

Prep Type: Total

Prep Batch: 12H0789\_P

%Rec.

Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	
1,1-Dichloroethane	6.99		20.0	24.8		ug/L	89	50 - 130	
1,2-Dichloroethane	<1.00		20.0	20.4		ug/L	102	55 - 140	
1,1-Dichloroethene	7.86		20.0	19.8		ug/L	60	35 - 135	
cis-1,2-Dichloroethene	51.6		20.0	63.2		ug/L	58	45 - 135	
trans-1,2-Dichloroethene	<1.00		20.0	17.9		ug/L	88	45 - 145	
Methylene Chloride	<5.00		20.0	18.4		ug/L	92	45 - 145	
Tetrachloroethene	369		20.0	328	MHA	ug/L	-207	40 - 135	
1,1,1-Trichloroethane	34.7	CIN	20.0	48.8	CIN	ug/L	70	40 - 125	
1,1,2-Trichloroethane	<1.00		20.0	22.3		ug/L	109	60 - 130	
Trichloroethene	16.2		20.0	32.7		ug/L	82	50 - 130	
Vinyl chloride	<1.00	C9	20.0	14.9	C9	ug/L	74	30 - 135	
Xylenes, total	<3.00		60.0	59.9		ug/L	100	40 - 135	
<b>Surrogate</b>									
Dibromofluoromethane	98								
Toluene-d8	97								
4-Bromofluorobenzene	105								

Lab Sample ID: 12H0789-MSD1

Matrix: Water - NonPotable

Analysis Batch: 12H0789

Client Sample ID: 30515 - 3rd Quarter

Prep Type: Total

Prep Batch: 12H0789\_P

%Rec.

RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec		RPD	Limit
Acetone	<10.0		20.0	16.9		ug/L	82	45 - 150	8	35	
1,1-Dichloroethane	6.99		20.0	24.2		ug/L	86	50 - 130	2	25	
1,2-Dichloroethane	<1.00		20.0	20.0		ug/L	100	55 - 140	2	15	
1,1-Dichloroethene	7.86		20.0	21.7		ug/L	69	35 - 135	9	30	
cis-1,2-Dichloroethene	51.6		20.0	61.8		ug/L	51	45 - 135	2	20	
trans-1,2-Dichloroethene	<1.00		20.0	17.8		ug/L	88	45 - 145	0.2	35	
Methylene Chloride	<5.00		20.0	18.0		ug/L	90	45 - 145	2	30	
Tetrachloroethene	369		20.0	318	MHA	ug/L	-256	40 - 135	3	20	
1,1,1-Trichloroethane	34.7	CIN	20.0	46.3	CIN	ug/L	58	40 - 125	5	20	
1,1,2-Trichloroethane	<1.00		20.0	20.5		ug/L	100	60 - 130	9	15	
Trichloroethene	16.2		20.0	31.5		ug/L	76	50 - 130	4	20	
Vinyl chloride	<1.00	C9	20.0	13.2	C9	ug/L	66	30 - 135	12	20	
Xylenes, total	<3.00		60.0	56.7		ug/L	94	40 - 135	6	20	
<b>Surrogate</b>											
Dibromofluoromethane	98										
Toluene-d8	95										
4-Bromofluorobenzene	100										

## QC Association Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 12-233

TestAmerica Job ID: CVH1006

### GCMS Volatiles

#### Analysis Batch: 12H0789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12H0789-BLK1	Method Blank	Total	Water - NonPotable	SW 8260B	12H0789_P
12H0789-BS1	Lab Control Sample	Total	Water - NonPotable	SW 8260B	12H0789_P
12H0789-MS1	30515 - 3rd Quarter	Total	Water - NonPotable	SW 8260B	12H0789_P
12H0789-MSD1	30515 - 3rd Quarter	Total	Water - NonPotable	SW 8260B	12H0789_P
CVH1006-01	30515 - 3rd Quarter	Total	Ground Water	SW 8260B	12H0789_P

#### Analysis Batch: 12H0905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVH1006-01	30515 - 3rd Quarter	Total	Ground Water	SW 9041A	12H0905_P

#### Prep Batch: 12H0789\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12H0789-BLK1	Method Blank	Total	Water - NonPotable	SW 5030B	
12H0789-BS1	Lab Control Sample	Total	Water - NonPotable	SW 5030B	
12H0789-MS1	30515 - 3rd Quarter	Total	Water - NonPotable	SW 5030B	
12H0789-MSD1	30515 - 3rd Quarter	Total	Water - NonPotable	SW 5030B	
CVH1006-01	30515 - 3rd Quarter	Total	Ground Water	SW 5030B	

#### Prep Batch: 12H0905\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVH1006-01	30515 - 3rd Quarter	Total	Ground Water	Default Prep VOC	

## Lab Chronicle

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVH1006

Client Sample ID: 30515 - 3rd Quarter

Date Collected: 08/15/12 09:30

Date Received: 08/15/12 13:49

Lab Sample ID: CVH1006-01

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	12H0789_P	08/16/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12H0789	08/16/12 12:31	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12H0905_P	08/20/12 15:30	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12H0905	08/20/12 15:35	FMK	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

## Definitions/Glossary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVH1006

### Qualifiers

#### GCMS Volatiles

Qualifier	Qualifier Description
CIN	The % RSD for this compound was above 15%. The average % RSD for all compounds in the calibration met the 15% criteria specified in EPA methods 8260B/8270C.
C9	Calibration Verification recovery was outside the method control limits for this analyte. The LCS for this analyte met CCV acceptance criteria, and was used to validate the batch.
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
♂	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Certification Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVH1006

### Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA - LAP	IHLAP		101044	11-01-12
Illinois	NELAC	5	200024	11-29-12
Iowa	State Program	7	7	12-01-13
Kansas	NELAC	7	E-10341	01-31-13
Minnesota	NELAC	5	019-999-319	12-31-12
North Dakota	State Program	8	R-186	09-30-12
Oregon	NELAC	10	IA100001	09-30-12
Wisconsin	State Program	5	999917270	08-31-12

## Method Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVH1006

Method	Method Description	Protocol	Laboratory
SW 8260B	Volatile Organic Compounds	TAL CF	
SW 9041A	VOC Preservation Check	TAL CF	

**Protocol References:**

**Laboratory References:**

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401



Sauer Danfoss – Ames Iowa  
TA Work Order #CVH1006

### Case Narrative

TestAmerica – Cedar Falls received one sample on August 15, 2012. The cooler was within laboratory temperature requirements. Requested analysis was 8260 volatile organic analysis.

Sample ID		Date	
Field	Lab ID	Collected	Received
30515 – 3 <sup>rd</sup> Quarter	CVH1006	08/15/2012 0930	08/15/2012 1349

#### 8260 Volatiles (Batch #12F0719)

Method Blank – No detections of target compounds.

Laboratory Control Sample (LCS) – No deviations

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) – Tetrachloroethylene was below laboratory control limits

Sample surrogates – No deviations

Sample Dilutions – No Deviations

Continuing Calibration Verification – Vinyl Chloride (74%) was below laboratory acceptance criteria. The laboratory control sample (94%) validated the analytical batch/

CIN: The %RSD for the calibration of 1,1,1-Trichloroethane (16.6%) used in result determination was above method specified %15.

TestAmerica Cedar Falls  
704 Enterprise Drive

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

Cedar Falls, IA 50613  
phone 319.277.2401 fax 319.277.2425

### Chain of Custody Record

TestAmerica Laboratories, Inc.

COC No:	of _____ COCs
Job No.	12-233
SDG No.	
Sampler:	Jason Miller
Sample Specific Notes:	

Client Contact	Project Manager: Ken Thompson	Site Contact:	Date:	
Fehr-Graham 221 E Main Street Ste 200 Freeport, IL 61032 815-235-7643 Phone 815-235-1432 FAX Project Name: 12-233 Site: Sauer - Ames PO #	Tel/Fax: 915 235-7643 Analysis Turnaround Time Calendar (C) or Work Days (W) STD TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day	Lab Contact:	Carrier:	
Sample Identification	Sample Date 30515 - 3rd Quarter 2012	Sample Time 8/15 9:30	Sample Type WW	
	Matrix 3	# of Cont. X	Filtered Sample Y005 (30515)	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other				
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant    Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>			Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Special Instructions/QC Requirements & Comments:  Please send report to aschneiderman@fehr-graham.com				

8/27/2012

Relinquished by: Jason Miller	Company: FGA	Date/Time: 8/15/12 1:49	Received by: P. Schaefer	Company: TestAmerica	Date/Time: 8/15/12 1:349
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613  
800-750-2401 • 319-277-2425 FAX

## Sample Receipt and Temperature Log Form

Client: Fehr Grahm

Project: Sauer - Ames

City: Freeport

Date: 8/15/12 Receiver's Initials: BCC Time (Delivered): 1349

### Temperature Record:

<b>Cooler ID# (If Applicable)</b>	<b>Client</b>
<u>7.0 °C On Ice</u>	

Temp Blank

Temperature out of compliance

### Thermometer:

- IR - 111531565 'D'
- IR - 111531506 'E'
- IR - 61854108 'Front'
- 101681126

### Courier:

- UPS
- TA Courier
- FedEx
- TA Field Services
- FedEx Ground
- Client
- US Postal Service
- Other
- Spee-Dee

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

- Sample(s) not received in a cooler.
- Samples(s) received same day of sampling.
- Evidence of a chilling process
- No Temp. Blank. Inside temperature of cooler recorded.
- Temperature not taken:

\*Refer to SOP CF-SS-01 for Temperature Criteria

F:\DeimerlyC\QA Folder\QA Forms & Log Book pgs\Cooler Receipt rev17.doc

**FEHR GRAHAM**  
ENGINEERING & ENVIRONMENTAL

UPS Overnight Tracking Number: 1Z 651 395 01 5159 7581

January 8, 2013

Mr. Gary Erickson  
Sauer-Danfoss (US) Company  
2800 East 13<sup>th</sup> Street  
Ames, IA 50010

**FILE COPY**

**RE: Non-Domestic Waste Pretreatment Program Quarterly Report – 4th Quarter 2012**

Dear Mr. Erickson:

Enclosed please find three (3) copies of the above-referenced documents. Please review for completeness and accuracy. If satisfactory, sign and date where indicated. The original set, along with the enclosed cover letter, should be forwarded to the City of Ames Water and Pollution Control Department. For your convenience, certified mailing labels are enclosed. Please retain two (2) copies and I will file when next on-site.

**A hardcopy of the entire report must be received by the City of Ames no later than January 10, 2013.**

Please note that the sample collected October 10, 2012, returned violations for TSS of 1,720 mg/L with a permit limit of 1,600 mg/L, COD of 5,460 mg/L with a permit limit of 2,700 mg/L and CBOD of >1970 mg/L with a permit limit of 1,800 mg/L. An additional sample collected on November 20, 2012, returned results below the permitted limits with the exception of TSS which exceeded the permit limit with a result of 2,450 mg/L. These results were submitted to the City of Ames, on December 13, 2012, and an initial investigation was completed to determine the cause of the TSS exceedence.

If you have any questions regarding the enclosed documents, please do not hesitate to contact this office.

Sincerely,



Jason Miller, CHMM  
Environmental Specialist

JAM:mll  
0:\Sauer-Danfoss, Inc\12-313\Final\JAM 12-313-4th Qtr Wastewater.docx  
Enclosure

**FEHR GRAHAM**  
ENGINEERING & ENVIRONMENTAL

CERTIFIED MAIL NUMBER: 7011 3500 0002 9993 9501

RETURN RECEIPT REQUESTED

January 9, 2013

**FILE COPY**

City of Ames, Iowa  
Water and Pollution Control Department  
300 East Fifth Street, Building 1  
Ames, IA 50010

**RE: Non-Domestic Waste Pretreatment Program Quarterly Report – 4th Quarter 2012**  
**Sauer-Danfoss (US) Company**  
**2800 East 13<sup>th</sup> Street**  
**Ames, IA 50010**  
**Facility Permit No. 6593-9**

Dear Sir/Madam:

Enclosed please find the Non-Domestic Waste Pretreatment Program Quarterly Report for wastewater discharge from the above-referenced facility for the 4th quarter of 2012. Also enclosed are copies of the analytical reports from Keystone Labs and Test America for the analysis of wastewater and groundwater remediation respectively and a summary of monthly flow in gals/month from the groundwater remediation project.

Please note that the sample collected October 10, 2012, returned violations for TSS of 1,720 mg/L with a permit limit of 1,600 mg/L, COD of 5,460 mg/L with a permit limit of 2,700 mg/L and CBOD of >1970 mg/L with a permit limit of 1,800 mg/L. An additional sample collected on November 20, 2012, returned results below the permitted limits with the exception of TSS which exceeded the permit limit with a result of 2,450 mg/L. These results were submitted to the City of Ames, on December 13, 2012. Sauer Danfoss completed an initial investigation of the TSS exceedence with the results being inconclusive which was submitted to the City of Ames on December 21, 2012. Additional sampling scheduled for the week of January 7, 2013, was proposed to further investigate the TSS exceedence.

Should you have any questions regarding these documents, please do not hesitate to contact this office.

Sincerely,



Jason A. Miller, CHMM  
Environmental Specialist

JAM:mll  
0:\Sauer-Danfoss, Inc\12-313\Final\JAM 12-313-4th Qtr Wastewater.docx  
Enclosures

cc: Sauer-Danfoss (with enclosures)

## Non-Domestic Waste Pretreatment Program

## Quarterly Report

(Non-Significant, Non-Domestic Contributor)

4th Quarter 2012

Reporting Period: 10/1/2012 to 12/31/2012

Submit results on or before the 10th of the month following the end of the quarter

Facility: Sauer-Danfoss

Permit No: 6593-9

Facility Contact: Gary Erickson

Facility Phone No: 515-239-6000

Sampling Location: Front Parking Lot North Manhole (Wastewater)/On-Site Wastewater Treatment  
Sample Port (GW Remediation)

Sample Type: Grab &amp; 24 Hour Composite

Sample Date: 11/15/12 (GW Remediation) / 10/10/12 (Wastewater)

Analyte	Permit Limit Mg/L	Sample Results Mg/L
Facility Flow	Sauer Danfoss 2800 East 13th Gals/Day	Sauer Danfoss 2800 East 13th 25,900
pH	6-10 pH	7.50
TSS	1,600	1,720
Cyanide	0.88	<0.007
Ammonia (NH3)	225	30.3
Total Kjeldahl Nitrogen (TKN)	280	135.0
Oil & Grease	300	110
CBOD 5	1,800	>1970
COD	2,700	5,460
<hr/>		
GW remediation	Max Expected Concentration ug/L	ug/L
Flow (remediation)	Gals/Quar	50,479
Acetone	44	<10
1,1-Dichloroethane	370	7.47
1,1-Dichloroethene	170	11
cis- 1,2-Dichloroethene	490	64.8
Tetrachloroethene	1700	499
1,1,1-Trichloroethane	650	23.7
Trichloroethene	110	24.8
Total Xylenes	11	<3.0

Note: Please attach sample results from Laboratory

Process or Treatment Change: None

Additional Comments: Please see attached for Groundwater Remediation Flow Data.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed \_\_\_\_\_  
Authorized Representative

Date \_\_\_\_\_

Sauer-Danfoss  
Ames, IA  
Groundwater Remediation Flow Data

October 2012	7,020
November 2012	21,060
December 2012	22,399
Total flow (gals) 4th Quarter:	50,479
	555 gpd

# of days in Quarter =

91

# **Keystone Analytical Report**

**10/10/12**

## ANALYTICAL REPORT

October 24, 2012

Page 1 of 9

Work Order: 1J20590

Report To
Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010

Work Order Information
Date Received: 10/10/2012 11:50AM
Collector:
Phone: (515) 239-6539
PO Number: 4501784596

Project : Quarterly Waste Pretreatment

Project Number: Pretreatment

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1J20590-01	Front Parking Lot North Manhole			Matrix: Water		Collected: 10/10/12 08:35	
<b>CBOD (5 day)</b>	> 1970 mg/L	4	1VJ0370	SM 5210 B	JRP	10/11/12 7:00	
Cyanide, total	<0.007 mg/L	0.007	1VJ0614	4500CN-E	DRB	10/18/12 14:36	
<b>Chemical Oxygen Demand</b>	5460 mg/L	1000	1VJ0393	EPA 410.4	SAI	10/12/12 15:38	
Nitrogen, Ammonia	30.3 mg/L	1.0	1VJ0455	SM 4500-NH3 B,E	JDK	10/15/12 15:59	
Oil/Grease, animal/vegetable	96 mg/L	5	1VJ0487	EPA 1664A	DMC	10/15/12 16:53	
Oil/Grease, petroleum	14 mg/L	5	1VJ0487	EPA 1664A	DMC	10/15/12 16:53	
Oil and Grease	110 mg/L	5	1VJ0487	EPA 1664A	DMC	10/15/12 16:53	
Nitrogen, Kjeldahl, total	135 mg/L	2.50	1VJ0653	EPA 351.2	sai	10/23/12 15:48	
<b>Solids, total suspended</b>	1720 mg/L	40	1VJ0452	USGS I-3765-85	MID	10/15/12 8:53	
Flow	25900 Gallons	1.0000	1VJ0372	Flow	JRP	10/10/12 8:35	
pH	7.5 pH	0.5	1VJ0372	SM 4500 H+ B	JRP	10/10/12 8:35	
Temperature	9.40 °C	0.00	1VJ0372	SM 2550 B	JRP	10/10/12 8:35	

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1J20590

October 24, 2012  
Page 2 of 9

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VJ0370 - General Prep Micro</b>										
Blank (1VJ0370-BLK1)						Prepared & Analyzed: 10/11/12				
CBOD (5 day)	ND	4	mg/L							
Duplicate (1VJ0370-DUP1)				Source: 1J20641-01		Prepared & Analyzed: 10/11/12				
CBOD (5 day)	131	4	mg/L		134			2.26	30	
Duplicate (1VJ0370-DUP2)				Source: 1J20642-01		Prepared & Analyzed: 10/11/12				
CBOD (5 day)	135	4	mg/L		139			2.92	30	
Reference (1VJ0370-SRM1)						Prepared & Analyzed: 10/11/12				
CBOD (5 day)	179	4	mg/L	198.000		90.4	84.6-115.4			
<b>Batch 1VJ0393 - Wet Chem Preparation</b>										
Blank (1VJ0393-BLK1)						Prepared: 10/11/12 Analyzed: 10/12/12				
Chemical Oxygen Demand	ND	10	mg/L							
LCS (1VJ0393-BS1)						Prepared: 10/11/12 Analyzed: 10/12/12				
Chemical Oxygen Demand	79.5	10	mg/L	77.7500		102	81-120			
Matrix Spike (1VJ0393-MS1)				Source: 1J20406-02		Prepared: 10/11/12 Analyzed: 10/12/12				
Chemical Oxygen Demand	357	80	mg/L	311.000	12.2	111	60-140			
Matrix Spike Dup (1VJ0393-MSD1)				Source: 1J20406-02		Prepared: 10/11/12 Analyzed: 10/12/12				
Chemical Oxygen Demand	427	80	mg/L	311.000	12.2	133	60-140	18.0	26	
<b>Batch 1VJ0452 - Wet Chem Preparation</b>										
Blank (1VJ0452-BLK1)						Prepared & Analyzed: 10/15/12				
Solids, total suspended	ND	1	mg/L							

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

October 24, 2012  
Page 3 of 9

Work Order: 1J20590

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1VJ0452 - Wet Chem Preparation**

<b>LCS (1VJ0452-BS1)</b>					Prepared & Analyzed: 10/15/12					
Solids, total suspended	14.6	1	mg/L	15.0000		97.3	72-110			
<b>Duplicate (1VJ0452-DUP1)</b>		Source: 1J20552-05			Prepared & Analyzed: 10/15/12					
Solids, total suspended	1940	100	mg/L		1890			2.61	17	

**Batch 1VJ0455 - Wet Chem Preparation**

<b>Blank (1VJ0455-BLK1)</b>					Prepared & Analyzed: 10/15/12					
Nitrogen, Ammonia	ND	1.0	mg/L							
<b>LCS (1VJ0455-BS1)</b>					Prepared & Analyzed: 10/15/12					
Nitrogen, Ammonia	9.7	1.0	mg/L	10.0000		97.0	85-110			
<b>Matrix Spike (1VJ0455-MS1)</b>		Source: 1J20794-01			Prepared & Analyzed: 10/15/12					
Nitrogen, Ammonia	15.4	1.0	mg/L	10.0000	5.7	97.1	85-110			
<b>Matrix Spike Dup (1VJ0455-MSD1)</b>		Source: 1J20794-01			Prepared & Analyzed: 10/15/12					
Nitrogen, Ammonia	15.1	1.0	mg/L	10.0000	5.7	94.1	85-110	1.96	10.	
<b>Reference (1VJ0455-SRM1)</b>					Prepared & Analyzed: 10/15/12					
Nitrogen, Ammonia	9.8	1.0	mg/L	10.0000		98.5	75-125			

**Batch 1VJ0487 - Wet Chem Preparation**

<b>Blank (1VJ0487-BLK1)</b>					Prepared & Analyzed: 10/15/12					
Oil and Grease	ND	4	mg/L							
Oil/Grease, animal/vegetable	ND	4	"							
Oil/Grease, petroleum	ND	4	"							

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1J20590

October 24, 2012  
Page 4 of 9

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VJ0487 - Wet Chem Preparation</b>										
<b>LCS (1VJ0487-BS1)</b>										
Prepared & Analyzed: 10/15/12										
Oil and Grease	32	4	mg/L	40.0000		79.2	78-114			
Oil/Grease, animal/vegetable	15	4	"	20.0000		76.5	64-132			
Oil/Grease, petroleum	16	4	"	20.0000		82.0	64-132			
<b>Matrix Spike (1VJ0487-MS1)</b>										
Source: 1J20582-01										
Prepared & Analyzed: 10/15/12										
Oil and Grease	52	4	mg/L	40.0000	29	58.5	78-114			QM-19
Oil/Grease, animal/vegetable	29	4	"	20.0000	24	23.3	64-132			QM-19
Oil/Grease, petroleum	23	4	"	20.0000	4	93.7	64-132			
<b>Matrix Spike Dup (1VJ0487-MSD1)</b>										
Source: 1J20582-01										
Prepared & Analyzed: 10/15/12										
Oil and Grease	53	4	mg/L	40.0000	29	60.6	78-114	1.62	18	QM-19
Oil/Grease, animal/vegetable	27	4	"	20.0000	24	12.4	64-132	7.81	34	QM-19
Oil/Grease, petroleum	26	4	"	20.0000	4	109	64-132	12.2	34	
<b>Batch 1VJ0614 - Wet Chem Preparation</b>										
<b>Blank (1VJ0614-BLK1)</b>										
Prepared & Analyzed: 10/18/12										
Cyanide, total	ND	0.007	mg/L							
<b>LCS (1VJ0614-BS1)</b>										
Prepared & Analyzed: 10/18/12										
Cyanide, total	0.018	0.007	mg/L	0.020000		90.8	77-125			
<b>Matrix Spike (1VJ0614-MS1)</b>										
Source: 1J21056-01										
Prepared & Analyzed: 10/18/12										
Cyanide, total	0.021	0.007	mg/L	0.020000	0.002	97.2	79-127			
<b>Matrix Spike Dup (1VJ0614-MSD1)</b>										
Source: 1J21056-01										
Prepared & Analyzed: 10/18/12										
Cyanide, total	0.020	0.007	mg/L	0.020000	0.002	92.3	79-127	4.76	11	

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

October 24, 2012  
Page 5 of 9

Work Order: 1J20590

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VJ0653 - Wet Chem Preparation</b>										
Blank (1VJ0653-BLK1)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	ND	0.50	mg/L							
Blank (1VJ0653-BLK2)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	ND	0.50	mg/L							
Blank (1VJ0653-BLK3)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	ND	0.50	mg/L							
Blank (1VJ0653-BLK4)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	ND	0.50	mg/L							
Blank (1VJ0653-BLK5)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	ND	0.50	mg/L							
LCS (1VJ0653-BS1)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	20.6	0.50	mg/L	20.0000		103	82-114			
LCS (1VJ0653-BS2)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	20.0	0.50	mg/L	20.0000		100	82-114			
LCS (1VJ0653-BS3)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	19.9	0.50	mg/L	20.0000		99.5	82-114			
LCS (1VJ0653-BS4)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	20.2	0.50	mg/L	20.0000		101	82-114			
LCS (1VJ0653-BS5)										Prepared: 10/19/12 Analyzed: 10/23/12
Nitrogen, Kjeldahl, total	20.2	0.50	mg/L	20.0000		101	82-114			

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1J20590

October 24, 2012  
Page 6 of 9

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VJ0653 - Wet Chem Preparation</b>										
Matrix Spike (1VJ0653-MS1)		Source: 1J20532-01			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	11.1	0.50	mg/L	10.0000	0.89	102	76-123			
Matrix Spike (1VJ0653-MS2)		Source: 1J20756-01			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	81.8	5.00	mg/L	10.0000	69.5	123	76-123			
Matrix Spike (1VJ0653-MS3)		Source: 1J20807-02			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	13.4	0.50	mg/L	10.0000	2.69	107	76-123			
Matrix Spike (1VJ0653-MS4)		Source: 1J20870-03			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	71.4	1.25	mg/L	25.0000	42.7	115	76-123			
Matrix Spike (1VJ0653-MS5)		Source: 1J20870-21			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	88.1	1.25	mg/L	50.0000	31.7	113	76-123			
Matrix Spike Dup (1VJ0653-MSD1)		Source: 1J20532-01			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	11.3	0.50	mg/L	10.0000	0.89	104	76-123	1.29	11	
Matrix Spike Dup (1VJ0653-MSD2)		Source: 1J20756-01			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	77.8	5.00	mg/L	10.0000	69.5	82.8	76-123	5.06	11	
Matrix Spike Dup (1VJ0653-MSD3)		Source: 1J20807-02			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	13.1	0.50	mg/L	10.0000	2.69	104	76-123	2.23	11	
Matrix Spike Dup (1VJ0653-MSD4)		Source: 1J20870-03			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	.71.5	1.25	mg/L	25.0000	42.7	115	76-123	0.252	11	
Matrix Spike Dup (1VJ0653-MSD5)		Source: 1J20870-21			Prepared: 10/19/12	Analyzed: 10/23/12				
Nitrogen, Kjeldahl, total	90.0	1.25	mg/L	50.0000	31.7	117	76-123	2.12	11	

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

October 24, 2012  
Page 7 of 9

Work Order: 1J20590

**Certified Analyses included in this Report**

Method/Matrix	Analyte	Certifications
<i>4500CN-E in Water</i>	Cyanide, total	KS-NT,NELAC,SIA1X
<i>EPA 1664A In Water</i>	Oil and Grease	KS-NT,NELAC,SIA1X
	Oil/Grease, animal/vegetable	KS-NT,NELAC,SIA1X
	Oil/Grease, petroleum	KS-NT,NELAC,SIA1X
<i>EPA 351.2 In Water</i>	Nitrogen, Kjeldahl, total	SIA1X,NELAC,KS-KC
<i>EPA 410.4 in Water</i>	Chemical Oxygen Demand	KS-NT,NELAC,SIA1X
<i>SM 2550 B In Water</i>	Temperature	SIA1X
<i>SM 4500-NH3 B,E in Water</i>	Nitrogen, Ammonia	KS-NT,NELAC,SIA1X
<i>SM 5210 B In Water</i>	CBOD (5 day)	SIA1X
<i>USGS I-3765-85 in Water</i>	Solids, total suspended	SIA1X,NELAC,KS-NT

Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2013
KS-NT	Kansas Department of Health and Environment	E-10287	10/30/2012
MO-KC	Missouri Department of Natural Resources	140	04/30/2013
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2013
SIA1X	Iowa Department of Natural Resources	95	02/01/2014

**Notes and Definitions**

- QM-19 The MS or MSD recovery was outside acceptance limits. This resulted in an unacceptable RPD. All other QC was acceptable.
- R-GT > 1970

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL= Method Reporting Limit.*

# Keystone

LABORATORIES, INC.



MEMBER  
**ACIL**

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1J20590

October 24, 2012  
Page 8 of 9

End of Report

Sue Thompson

Keystone Laboratories, Inc.

Sue Thompson  
Project Manager II

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

Phone 641-792-8451

600 East 17th Street South  
Newton, IA 50208

Fax 641-792-7989

# Keystone

LABORATORIES, INC.



M. E. M. B. E. R.  
ACT

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1J20590

October 24, 2012  
Page 9 of 9

CHAIN OF CUSTODY RECORD									
<b>Keystone</b> <b>LABORATORIES, INC.</b>					Page 1 of 1 Printed: 10/9/2012 5:08:28PM <a href="http://www.keystonelabs.com">www.keystonelabs.com</a>				
SITE INFORMATION			REPORT TO			INVOICE TO			
Sampler: Project: Quarterly Waste Pretreatment Pretreatment			Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010			Accounts Payable Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010			
SPECIAL INSTRUCTIONS			LAB USE ONLY			<input type="checkbox"/> Custody Seal <input type="checkbox"/> Containers Intact <input type="checkbox"/> COC/Labels Agree <input type="checkbox"/> Preservation Confirmed <input type="checkbox"/> Received on Ice			
None  Turn Around Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH, need by <u>11</u>			Work Order <u>1J20590</u> Temperature: Turn-Cooler: No						
Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number	
01-001	Front Parking Lot North Manhole	Water		10/10/12	8:35		temperature nh3-4500be on-4500s pb-field-4500 ts-i-3765-83	01 ap-profile-1664 cbod-5210 cod-44104 dx-3512 flow-total	
<i>Jay R. Ryker 10/10/12 11:00</i> Relinquished By _____ Date/Time _____ Received By _____ Date/Time _____						Relinquished By <u>O. Denney</u> Date/Time <u>10/10/12 11:50</u> Received for Lab By _____ Date/Time _____ Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy			Remarks:

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

Phone 641-792-8951

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Newton, IA 50208

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**Keystone Analytical Report**

**11/20/12**

## ANALYTICAL REPORT

December 11, 2012

Page 1 of 5

Work Order: 1K21181

Report To
Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010

Work Order Information
Date Received: 11/20/2012 10:00AM Collector: Pryke, Jim Phone: (515) 239-6539 PO Number: 4501784596

Project : Quarterly Waste Pretreatment

Project Number: Pretreatment

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1K21181-01	Front Parking Lot North Manhole			Matrix:Water		Collected: 11/20/12 08:30	
CBOD (5 day)	1520 mg/L	4	IVK0700	SM 5210 B	JRP	11/21/12 9:38	
Chemical Oxygen Demand	2350 mg/L	1000	1VL0050	EPA 410.4	SAI	12/04/12 13:33	
Solids, total suspended	2450 mg/L	40	IVK0775	USGS I-3765-85	MID	11/26/12 14:28	

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1K21181

December 11, 2012  
Page 2 of 5

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
<b>Batch 1VK0700 - General Prep Micro</b>										
<b>Blank (1VK0700-BLK1)</b> Prepared & Analyzed: 11/21/12										
CBOD (5 day)	ND	4	mg/L							
<b>Duplicate (1VK0700-DUP1)</b> Source: 1K21248-01 Prepared & Analyzed: 11/21/12										
CBOD (5 day)	106	4	mg/L		113			6.39	30	
<b>Duplicate (1VK0700-DUP2)</b> Source: 1K21249-01 Prepared & Analyzed: 11/21/12										
CBOD (5 day)	198	4	mg/L		206			3.96	30	
<b>Reference (1VK0700-SRM1)</b> Prepared & Analyzed: 11/21/12										
CBOD (5 day)	205	4	mg/L	198.000		104	84.6-115.4			
<b>Batch 1VK0775 - Wet Chem Preparation</b>										
<b>Blank (1VK0775-BLK1)</b> Prepared & Analyzed: 11/26/12										
Solids, total suspended	ND	1	mg/L							
<b>LCS (1VK0775-BS1)</b> Prepared & Analyzed: 11/26/12										
Solids, total suspended	12.6	1	mg/L	15.0000		84.0	72-110			
<b>Duplicate (1VK0775-DUP1)</b> Source: 1K21111-05 Prepared & Analyzed: 11/26/12										
Solids, total suspended	1870	100	mg/L		1840			1.62	17	
<b>Batch 1VL0050 - Wet Chem Preparation</b>										
<b>Blank (1VL0050-BLK1)</b> Prepared & Analyzed: 12/04/12										
Chemical Oxygen Demand	ND	10	mg/L							

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

December 11, 2012

Page 3 of 5

Work Order: 1K21181

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1VL0050 - Wet Chem Preparation</b>										
<b>LCS (1VL0050-BS1)</b>										
Chemical Oxygen Demand	72.9	10	mg/L		77.7500	93.7	81-120			
<b>Matrix Spike (1VL0050-MS1)</b>										
Chemical Oxygen Demand	362	80	mg/L		311.000	34.5	105	60-140		
<b>Matrix Spike Dup (1VL0050-MSD1)</b>										
Chemical Oxygen Demand	342	80	mg/L		311.000	34.5	98.7	60-140	5.72	26

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

**Certified Analyses included in this Report**

Method/Matrix	Analyte	Certifications
EPA 410.4 in Water	Chemical Oxygen Demand	KS-NT,NELAC,SIA1X
SM 5210 B in Water	CBOD (5 day)	SIA1X
USGS I-3765-85 in Water	Solids, total suspended	SIA1X,NELAC,KS-NT

Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2013
KS-NT	Kansas Department of Health and Environment	E-10287	10/30/2013
MO-KC	Missouri Department of Natural Resources	140	04/30/2013
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2013
SIA1X	Iowa Department of Natural Resources	95	02/01/2014

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Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1K21181

December 11, 2012  
Page 4 of 5

End of Report

Sue Thompson

Keystone Laboratories, Inc.

Sue Thompson  
Project Manager II

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.*

# Keystone

LABORATORIES, INC.

Sauer-Danfoss  
2800 E. 13th St.  
Ames, IA 50010

Work Order: 1K21181

December 11, 2012  
Page 5 of 5



M E M B E R  
**ACIL**

**CHAIN OF CUSTODY RECORD**

1K21181

Page 1 of 1  
Printed: 11/20/2012 6:57:25AM

<b>SITE INFORMATION</b>		<b>REPORT TO</b>		<b>INVOICE TO</b>				
Sampler: <i>Pryke</i> Quarterly Waste Pretreatment Pretreatment		Gary Erickson Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010		Accounts Payable Sauer-Danfoss 2800 E. 13th St. Ames, IA 50010				
<b>SPECIAL INSTRUCTIONS</b>		<b>LAB USE ONLY</b>						
None		Work Order _____ Temperature _____ Turn-Cooler: No		<input type="checkbox"/> Custody Seal <input type="checkbox"/> Containers Intact <input type="checkbox"/> COC/Labels Agree <input type="checkbox"/> Preservation Confirmed <input type="checkbox"/> Received On Ice				
Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number Containers	Analysis	Lab Sample Number
01-001	Front Parking Lot North Manhole	Water		11/20/12	8 <sup>AM</sup>			01

*Aaron L. Ryker 11/20/12 10<sup>AM</sup>*

Relinquished By Date/Time: *T. Rivers 11/20/12 10:00*

Received By Date/Time: *T. Rivers 11/20/12 10:00*

Received for Lab By Date/Time: *T. Rivers 11/20/12 10:00*

Turn Around Time

Standard     RUSH, need by   /  /  

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL = Method Reporting Limit.

Phone 641-792-8451

600 East 17th Street South  
Newton, IA 50208

Fax 641-792-7989

**Test America Analytical Report**

**11/15/12**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: 800-750-2401

TestAmerica Job ID: CVK1010

Client Project/Site: 12-233

Client Project Description: Sauer Danfoss - Ames, Iowa

For:

FEHR-GRAHAM & ASSOCIATES - FREEPORT

221 E. Main St., Ste. 200

Freeport, IL 61032

Attn: Ken Thompson



Authorized for release by:

12/5/2012 3:55:32 PM

Derrick Klinkenberg

Organics Manager

derrick.klinkenberg@testamericainc.com

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CVK1010-01	30882 - 4th Quarter	Ground Water	11/15/12 09:45	11/15/12 13:36

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TestAmerica Cedar Falls

## Detection Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

Client Sample ID: 30882 - 4th Quarter

Lab Sample ID: CVK1010-01

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Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	7.47		1.00		ug/L	1.00	-	SW 8260B	Total
1,1-Dichloroethene	11.0		2.00		ug/L	1.00	-	SW 8260B	Total
cis-1,2-Dichloroethene	64.8	M1	1.00		ug/L	1.00	-	SW 8260B	Total
trans-1,2-Dichloroethene	1.00		1.00		ug/L	1.00	-	SW 8260B	Total
Tetrachloroethene	499	MHA	1.00		ug/L	1.00	-	SW 8260B	Total
1,1,1-Trichloroethane	23.7		1.00		ug/L	1.00	-	SW 8260B	Total
Trichloroethylene	24.8		1.00		ug/L	1.00	-	SW 8260B	Total

TestAmerica Cedar Falls

## Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 12-233

TestAmerica Job ID: CVK1010

Client Sample ID: 30882 - 4th Quarter

Lab Sample ID: CVK1010-01

Date Collected: 11/15/12 09:45

Matrix: Ground Water

Date Received: 11/15/12 13:36

Sampler Phone Number: (815) 235-7643

Sampler Name: Jason Miller

5

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
1,1-Dichloroethane	7.47		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
1,1-Dichloroethene	11.0		2.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
cis-1,2-Dichloroethene	64.8 M1		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
trans-1,2-Dichloroethene	1.00		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
Methylene Chloride	<5.00		5.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
Tetrachloroethene	499 MHA		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
1,1,1-Trichloroethane	23.7		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
Trichloroethene	24.8		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
Vinyl chloride	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
Xylenes, total	<3.00		3.00		ug/L		11/18/12 00:00	11/18/12 10:14	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	103		75 - 120				11/18/12 00:00	11/18/12 10:14	1.00
Toluene-d8	97		80 - 120				11/18/12 00:00	11/18/12 10:14	1.00
4-Bromofluorobenzene	96		75 - 110				11/18/12 00:00	11/18/12 10:14	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		11/20/12 13:56	11/20/12 14:03	1.00

TestAmerica Cedar Falls

## Definitions/Glossary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

### Qualifiers

#### GCMS Volatiles

Qualifier	Qualifier Description
M1	The MS and/or MSD were outside control limits.
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information.

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### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
✓	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Surrogate Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Ground Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVK1010-01	30882 - 4th Quarter	103	97	96

**Surrogate Legend**  
DBFM = Dibromofluoromethane  
Toluene-d8 = Toluene-d8  
BFB = 4-Bromofluorobenzene

7

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
12K0899-BLK1	Method Blank	105	98	95

**Surrogate Legend**  
DBFM = Dibromofluoromethane  
Toluene-d8 = Toluene-d8  
BFB = 4-Bromofluorobenzene

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (80-120)
12K0899-BS1	Lab Control Sample	102	97	101
12K0899-MS1	30882 - 4th Quarter	103	97	99
12K0899-MSD1	30882 - 4th Quarter	98	96	99

**Surrogate Legend**  
DBFM = Dibromofluoromethane  
Toluene-d8 = Toluene-d8  
BFB = 4-Bromofluorobenzene

TestAmerica Cedar Falls

# QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

## Method: SW 8260B - Volatile Organic Compounds

Lab Sample ID: 12K0899-BLK1

Matrix: Water - NonPotable

Analysis Batch: 12K0899

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 12K0899\_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
Methylene Chloride	<5.00		5.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
Tetrachloroethene	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
Trichloroethene	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
Vinyl chloride	<1.00		1.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
Xylenes, total	<3.00		3.00		ug/L		11/18/12 00:00	11/18/12 05:28	1.00
<hr/>									
Surrogate	Blank %Recovery	Blank Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	105		75 - 120				11/18/12 00:00	11/18/12 05:28	1.00
Toluene-d8	98		80 - 120				11/18/12 00:00	11/18/12 05:28	1.00
4-Bromofluorobenzene	95		75 - 110				11/18/12 00:00	11/18/12 05:28	1.00

Lab Sample ID: 12K0899-BS1

Matrix: Water - NonPotable

Analysis Batch: 12K0899

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 12K0899\_P

%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	20.0	13.8		ug/L		69	60 - 150
1,1-Dichloroethane	20.0	15.8		ug/L		79	60 - 130
1,2-Dichloroethane	20.0	16.3		ug/L		81	65 - 140
1,1-Dichloroethene	20.0	13.6		ug/L		68	60 - 135
cis-1,2-Dichloroethene	20.0	18.0		ug/L		80	70 - 135
trans-1,2-Dichloroethene	20.0	16.1		ug/L		81	60 - 145
Methylene Chloride	20.0	16.0		ug/L		80	55 - 145
Tetrachloroethene	20.0	17.5		ug/L		88	70 - 135
1,1,1-Trichloroethane	20.0	16.4		ug/L		82	60 - 125
1,1,2-Trichloroethane	20.0	16.3		ug/L		82	60 - 125
Trichloroethene	20.0	16.6		ug/L		83	75 - 125
Vinyl chloride	20.0	15.1		ug/L		75	70 - 130
Xylenes, total	60.0	49.2		ug/L		82	45 - 135
<hr/>							
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Dibromofluoromethane	102		75 - 120				
Toluene-d8	97		80 - 120				
4-Bromofluorobenzene	101		80 - 120				

TestAmerica Cedar Falls

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12K0899-MS1

Matrix: Water - NonPotable

Analysis Batch: 12K0899

Client Sample ID: 30882 - 4th Quarter

Prep Type: Total

Prep Batch: 12K0899\_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	Limits
Acetone	<10.0		20.0	11.1		ug/L		53	45 - 150
1,1-Dichloroethane	7.47		20.0	23.2		ug/L		79	50 - 130
1,2-Dichloroethane	<1.00		20.0	17.6		ug/L		88	55 - 140
1,1-Dichloroethene	11.0		20.0	21.3		ug/L		51	35 - 135
cis-1,2-Dichloroethene	64.8 M1		20.0	71.4 M1		ug/L		33	45 - 135
trans-1,2-Dichloroethene	1.00		20.0	17.6		ug/L		83	45 - 145
Methylene Chloride	<5.00		20.0	16.2		ug/L		81	45 - 145
Tetrachloroethene	499 MHA		20.0	430 MHA		ug/L		-343	40 - 135
1,1,1-Trichloroethane	23.7		20.0	38.2		ug/L		72	40 - 125
1,1,2-Trichloroethane	<1.00		20.0	17.6		ug/L		86	60 - 130
Trichloroethene	24.8		20.0	37.3		ug/L		62	50 - 130
Vinyl chloride	<1.00		20.0	15.2		ug/L		76	30 - 135
Xylenes, total	<3.00		60.0	48.8		ug/L		81	40 - 135
Surrogate				Matrix Spike %Recovery	Matrix Spike Qualifier	Matrix Spike Limits			
Dibromofluoromethane				103		75 - 120			
Toluene-d8				97		80 - 120			
4-Bromofluorobenzene				99		80 - 120			

Lab Sample ID: 12K0899-MSD1

Matrix: Water - NonPotable

Analysis Batch: 12K0899

Client Sample ID: 30882 - 4th Quarter

Prep Type: Total

Prep Batch: 12K0899\_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acetone	<10.0		20.0	10.0		ug/L		48	45 - 150	10	35
1,1-Dichloroethane	7.47		20.0	20.7		ug/L		66	50 - 130	11	25
1,2-Dichloroethane	<1.00		20.0	16.1		ug/L		80	55 - 140	9	15
1,1-Dichloroethene	11.0		20.0	20.7		ug/L		48	35 - 135	3	30
cis-1,2-Dichloroethene	64.8 M1		20.0	68.8 M1		ug/L		20	45 - 135	4	20
trans-1,2-Dichloroethene	1.00		20.0	15.7		ug/L		74	45 - 145	11	35
Methylene Chloride	<5.00		20.0	14.3		ug/L		72	45 - 145	12	30
Tetrachloroethene	499 MHA		20.0	416 MHA		ug/L		-416	40 - 135	3	20
1,1,1-Trichloroethane	23.7		20.0	37.7		ug/L		70	40 - 125	1	20
1,1,2-Trichloroethane	<1.00		20.0	17.2		ug/L		84	60 - 130	2	15
Trichloroethene	24.8		20.0	36.0		ug/L		56	50 - 130	4	20
Vinyl chloride	<1.00		20.0	13.2		ug/L		66	30 - 135	14	20
Xylenes, total	<3.00		60.0	47.7		ug/L		80	40 - 135	2	20
Surrogate				Matrix Spike Dup %Recovery	Matrix Spike Dup Qualifier	Matrix Spike Dup Limits				RPD	Limit
Dibromofluoromethane				98		75 - 120					
Toluene-d8				96		80 - 120					
4-Bromofluorobenzene				99		80 - 120					

TestAmerica Cedar Falls

## QC Association Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

### GCMS Volatiles

#### Analysis Batch: 12K0899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12K0899-BLK1	Method Blank	Total	Water - NonPotable	SW 8260B	12K0899_P
12K0899-BS1	Lab Control Sample	Total	Water - NonPotable	SW 8260B	12K0899_P
12K0899-MS1	30882 - 4th Quarter	Total	Water - NonPotable	SW 8260B	12K0899_P
12K0899-MSD1	30882 - 4th Quarter	Total	Water - NonPotable	SW 8260B	12K0899_P
CVK1010-01	30882 - 4th Quarter	Total	Water - NonPotable Ground Water	SW 8260B	12K0899_P

#### Analysis Batch: 12K1004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVK1010-01	30882 - 4th Quarter	Total	Ground Water	SW 9041A	12K1004_P

#### Prep Batch: 12K0899\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12K0899-BLK1	Method Blank	Total	Water - NonPotable	SW 5030B	
12K0899-BS1	Lab Control Sample	Total	Water - NonPotable	SW 5030B	
12K0899-MS1	30882 - 4th Quarter	Total	Water - NonPotable	SW 5030B	
12K0899-MSD1	30882 - 4th Quarter	Total	Water - NonPotable	SW 5030B	
CVK1010-01	30882 - 4th Quarter	Total	Water - NonPotable Ground Water	SW 5030B	

#### Prep Batch: 12K1004\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVK1010-01	30882 - 4th Quarter	Total	Ground Water	Default Prep VOC	

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TestAmerica Cedar Falls

## Lab Chronicle

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

Client Sample ID: 30882 - 4th Quarter

Lab Sample ID: CVK1010-01

Date Collected: 11/15/12 09:45

Matrix: Ground Water

Date Received: 11/15/12 13:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	12K0899_P	11/18/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12K0899	11/18/12 10:14	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12K1004_P	11/20/12 13:56	ZTB	TAL CF
Total	Analysis	SW 9041A		1.00	12K1004	11/20/12 14:03	ZTB	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

TestAmerica Cedar Falls

## Certification Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

### Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA - LAP	IHLAP		101044	11-01-14
Illinois	NELAC	5	200024	11-29-12
Iowa	State Program	7	7	12-01-13
Kansas	NELAC	7	E-10341	01-31-13
Minnesota	NELAC	5	019-999-319	12-31-13
North Dakota	State Program	8	R-186	09-29-13
Oregon	NELAC	10	IA100001	09-29-13
Wisconsin	State Program	5	999917270	08-31-13



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TestAmerica Cedar Falls

## Method Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVK1010

Method	Method Description	Protocol	Laboratory
SW 8260B	Volatile Organic Compounds	TAL CF	
SW 9041A	VOC Preservation Check	TAL CF	

### Protocol References:

#### Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

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TestAmerica Cedar Falls



THE LEADER IN ENVIRONMENTAL TESTING

Sauer Danfoss – Ames Iowa  
TA Work Order #CVK1010



### Case Narrative

TestAmerica – Cedar Falls received one sample on November 15, 2012. The cooler was within laboratory temperature requirements. Requested analysis was SW-8260 volatile organic analysis.



Sample ID		Date	
Field	Lab ID	Collected	Received
30882	CVK1010	11/15/12 0945	11/15/12 1336

### 8260 Volatiles (Batch #12K0899)

13

Method Blank – No detections of target compounds.

Laboratory Control Sample (LCS) – No deviations

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) – This matrix spike and matrix spike duplicate were outside of laboratory control limits for cis-1,2-Dichloroethene and Tetrachlorothene.

Sample surrogates – No deviations

- Sample Dilutions – No dilutions were performed

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Cedar Falls Division  
704 Enterprise Drive  
Cedar Falls, IA 50613

Phone 319-277-2401 or 800-750-2401  
Fax 319-277-2425

To assist us in using the proper analytical methods,  
is this work being conducted for regulatory purposes?  
Compliance Monitoring \_\_\_\_\_

Client Name: Fehr Graham Client #: \_\_\_\_\_

Address: 221 E Main St Ste 200

City/State/Zip Code: Freeport, IL 61032

Project Manager: Ken Thompson

Email Address: \_\_\_\_\_

Telephone Number: 815 235-7643 Fax: 815 235-4632

Sampler Name: (Print Name) Jason Miller

Sampler Signature: Jason Miller

TAT Standard  
Rush (surcharges may apply)

Date Needed: \_\_\_\_\_

Fax Results: Y N

Email Results:  N

SAMPLE ID

30882-4th Qtr 2012

Date Sampled

Time Sampled

G = Grab, C = Composite

Field Filtered

Matrix	Preservation & # of Containers				
SL - Sludge	DW - Drinking Water	S - Soil/Solid	GW - Groundwater	WW - Wastewater	Other
HNO <sub>3</sub>	HCl	NaOH	H <sub>2</sub> SO <sub>4</sub>	Methanol	None
					Other (Specify)

Analyze For:

VOCs (methylbenzene)

X

QC Deliverables

- None
- Level 2
- (Batch QC)
- Level 3
- Level 4
- Other: \_\_\_\_\_

## REMARKS

### Special Instructions:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Comments
<u>Jason Miller</u>	11/15/12	1:30p	<u>James L. Miller</u>	11/15/12	13:36	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	

TAL-0033 (0706)

Page \_\_\_\_\_ of \_\_\_\_\_

# TestAmerica

Environmental Testing Laboratory

THE LEADER IN ENVIRONMENTAL TESTING

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613  
800-750-2401 • 319-277-2425 FAX

## Sample Receipt and Temperature Log Form

Client: Fehr Graham

Project: Silver Ames

City: Fresno, IL

Date: 11/15/12 Receiver's Initials: To Time (Delivered): 13:36

### Temperature Record:

Cooler ID# (If Applicable)
_____
_____ °C / On Ice

### Thermometer:

- IR - 111531565 'D'
- IR - 111531506 'E'
- IR - 61854108 'Front'
- 101681126

### Courier:

- |  |  |
|--|--|
| <input type="checkbox"/> UPS               | <input type="checkbox"/> TA Courier        |
| <input type="checkbox"/> FedEx             | <input type="checkbox"/> TA Field Services |
| <input type="checkbox"/> FedEx Ground      | <input checked="" type="checkbox"/> Client |
| <input type="checkbox"/> US Postal Service | <input type="checkbox"/> Other             |
| <input type="checkbox"/> Spee-Dee          | _____                                      |

Temp Blank

Temperature out of compliance

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

<input type="checkbox"/>	Sample(s) not received in a cooler.
<input checked="" type="checkbox"/>	Samples(s) received same day of sampling.
<input checked="" type="checkbox"/>	Evidence of a chilling process
<input type="checkbox"/>	No Temp. Blank. Inside temperature of cooler recorded.
<input checked="" type="checkbox"/>	Temperature not taken: _____

\*Refer to SOP CF-SS-01 for Temperature Criteria

**ATTACHMENT 3**

**Laboratory Report for October 16 - 17, 2012 Sampling Event**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: 800-750-2401

TestAmerica Job ID: CVJ1252

Client Project/Site: 12-233

Client Project Description: Sauer Danfoss - Ames, Iowa

For:

FEHR-GRAHAM & ASSOCIATES - FREEPORT  
221 E. Main Street, Ste. 200  
Freeport, IL 61032

Attn: Jeff Ogden



Authorized for release by:

10/31/2012 2:01:53 PM

Derrick Klinkenberg

Organics Manager

derrick.klinkenberg@testamericainc.com

### LINKS

Review your project  
results through

Total Access

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Case Narrative

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Job ID:** CVJ1252

**Laboratory:** TestAmerica Irvine

### Narrative

Job Narrative  
440-27189-1

### Comments

No additional comments.

### Receipt

The samples were received on 10/19/2012 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

### GC/MS VOA

Method(s) 8260B SIM: Surrogate recovery for the following sample(s) was outside control limits: CVJ1252-01 (440-27189-1), CVJ1252-02 (440-27189-2), CVJ1252-03 (440-27189-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B SIM: The following sample(s) was diluted due to the abundance of non-target analytes: CVJ1252-01 (440-27189-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

### VOA Prep

No analytical or quality issues were noted.

## Sample Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CVJ1252-01	30763 - R13	Ground Water	10/16/12 13:55	10/17/12 16:10
CVJ1252-02	30762 - MW-10	Ground Water	10/16/12 14:32	10/17/12 16:10
CVJ1252-03	30764 - R14R	Ground Water	10/16/12 15:22	10/17/12 16:10
CVJ1252-04	30775 - MW34	Ground Water	10/16/12 16:43	10/17/12 16:10
CVJ1252-05	30766 - MW12	Ground Water	10/16/12 17:35	10/17/12 16:10
CVJ1252-06	30771 - MW-R30	Ground Water	10/16/12 18:07	10/17/12 16:10
CVJ1252-07	30768 - MW-19	Ground Water	10/16/12 18:39	10/17/12 16:10
CVJ1252-08	30776 - EB01	Water	10/16/12 19:00	10/17/12 16:10
CVJ1252-09	30770 - D01	Ground Water	10/17/12 08:45	10/17/12 16:10
CVJ1252-10	30774 - MW-33	Ground Water	10/17/12 10:07	10/17/12 16:10
CVJ1252-11	30773 - MW-32	Ground Water	10/17/12 10:50	10/17/12 16:10
CVJ1252-12	30772 - MW-31	Ground Water	10/17/12 11:15	10/17/12 16:10
CVJ1252-13	30767 - MW-18	Ground Water	10/17/12 11:52	10/17/12 16:10
CVJ1252-14	30765 - MW-11	Ground Water	10/17/12 12:50	10/17/12 16:10
CVJ1252-15	30777 - EB02	Water	10/17/12 13:11	10/17/12 16:10
CVJ1252-16	30778 - TB01	Water	10/17/12 14:58	10/17/12 16:10

## Detection Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Client Sample ID: 30763 - R13

Lab Sample ID: CVJ1252-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	39	J	50	25	ug/L	25		8260B SIM	Total/NA
1,1-Dichloroethane	1560		25.0		ug/L	25.0		SW 8260B	Total
Tetrachloroethene	3270		25.0		ug/L	25.0		SW 8260B	Total
1,1,1-Trichloroethane	2290		25.0		ug/L	25.0		SW 8260B	Total
1,1,2-Trichloroethane	102		25.0		ug/L	25.0		SW 8260B	Total
Sulfate	11800		500		mg/L	500		SW 9056	Total

### Client Sample ID: 30762 - MW-10

Lab Sample ID: CVJ1252-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	9.6		5.0	2.5	ug/L	2.5		8260B SIM	Total/NA
1,1-Dichloroethane	12.3		5.00		ug/L	5.00		SW 8260B	Total
1,1-Dichloroethene	26.7		10.0		ug/L	5.00		SW 8260B	Total
cis-1,2-Dichloroethene	29.2		5.00		ug/L	5.00		SW 8260B	Total
Tetrachloroethene	352		5.00		ug/L	5.00		SW 8260B	Total
1,1,1-Trichloroethane	192		5.00		ug/L	5.00		SW 8260B	Total
Trichloroethene	27.4		5.00		ug/L	5.00		SW 8260B	Total
Sulfate	29.6		2.00		mg/L	2.00		SW 9056	Total

### Client Sample ID: 30764 - R14R

Lab Sample ID: CVJ1252-03

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.0		2.0	1.0	ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethane	3.27		1.00		ug/L	1.00		SW 8260B	Total
1,1-Dichloroethene	6.36		2.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	3.23		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	25.1		1.00		ug/L	1.00		SW 8260B	Total
Sulfate	42.4		5.00		mg/L	5.00		SW 9056	Total

### Client Sample ID: 30775 - MW34

Lab Sample ID: CVJ1252-04

No Detections

### Client Sample ID: 30766 - MW12

Lab Sample ID: CVJ1252-05

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	4.61		1.00		ug/L	1.00		SW 8260B	Total

### Client Sample ID: 30771 - MW-R30

Lab Sample ID: CVJ1252-06

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	34.2		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	24.9		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	1.07		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	59.2		1.00		ug/L	1.00		SW 8260B	Total

### Client Sample ID: 30768 - MW-19

Lab Sample ID: CVJ1252-07

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	120		40	20	ug/L	20		8260B SIM	Total/NA
1,1-Dichloroethane	67.8		1.00		ug/L	1.00		SW 8260B	Total
1,1-Dichloroethene	17.3		2.00		ug/L	1.00		SW 8260B	Total
cis-1,2-Dichloroethene	7.14		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	45.5		1.00		ug/L	1.00		SW 8260B	Total

## Detection Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Client Sample ID: 30768 - MW-19 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Lab Sample ID: CVJ1252-07	
								Method	Prep Type
1,1,1-Trichloroethane	9.35		1.00		ug/L	1.00	S	SW 8260B	Total
Trichloroethene	5.23		1.00		ug/L	1.00	S	SW 8260B	Total

### Client Sample ID: 30776 - EB01

<input type="checkbox"/> No Detections	Lab Sample ID: CVJ1252-08
--	---------------------------

### Client Sample ID: 30770 - D01

<input type="checkbox"/> No Detections	Lab Sample ID: CVJ1252-09
--	---------------------------

### Client Sample ID: 30774 - MW-33

<input type="checkbox"/> No Detections	Lab Sample ID: CVJ1252-10
--	---------------------------

### Client Sample ID: 30773 - MW-32

<input type="checkbox"/> No Detections	Lab Sample ID: CVJ1252-11
--	---------------------------

### Client Sample ID: 30772 - MW-31

<input type="checkbox"/> No Detections	Lab Sample ID: CVJ1252-12
--	---------------------------

### Client Sample ID: 30767 - MW-18

<input type="checkbox"/> No Detections	Lab Sample ID: CVJ1252-13
--	---------------------------

### Client Sample ID: 30765 - MW-11

Lab Sample ID: CVJ1252-14									
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	9.8		2.0	1.0	ug/L	1	S	8260B SIM	Total/NA
1,1-Dichloroethane	13.3		1.00		ug/L	1.00	S	SW 8260B	Total
1,1-Dichloroethene	33.3		2.00		ug/L	1.00	S	SW 8260B	Total
cis-1,2-Dichloroethene	28.5		1.00		ug/L	1.00	S	SW 8260B	Total
Tetrachloroethene	477		1.00		ug/L	1.00	S	SW 8260B	Total
1,1,1-Trichloroethane	244		1.00		ug/L	1.00	S	SW 8260B	Total
Trichloroethene	24.7		1.00		ug/L	1.00	S	SW 8260B	Total

### Client Sample ID: 30777 - EB02

<input type="checkbox"/> No Detections	Lab Sample ID: CVJ1252-15
--	---------------------------

### Client Sample ID: 30778 - TB01

<input type="checkbox"/> No Detections	Lab Sample ID: CVJ1252-16
--	---------------------------

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30763 - R13**

Date Collected: 10/16/12 13:55

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-01**

Matrix: Ground Water

Sampler Phone Number: (815) 235-7643

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	39	J	50	25	ug/L	-		10/23/12 19:30	25
<b>Surrogate</b>									
Dibromofluoromethane (Surrogate)	125	X	80 - 120				Prepared	Analyzed	Dil Fac

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<250		250		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
1,1-Dichloroethane	1560		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
1,2-Dichloroethane	<25.0		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
1,1-Dichloroethene	<50.0		50.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
cis-1,2-Dichloroethene	<25.0		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
trans-1,2-Dichloroethene	<25.0		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
Methylene Chloride	<125		125		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
Tetrachloroethene	3270		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
1,1,1-Trichloroethane	2290		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
1,1,2-Trichloroethane	102		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
Trichloroethene	<25.0		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
Vinyl chloride	<25.0		25.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
Xylenes, total	<75.0		75.0		ug/L		10/19/12 00:00	10/19/12 06:53	25.0
<b>Surrogate</b>									
Dibromofluoromethane	97		75 - 120				Prepared	Analyzed	Dil Fac
Toluene-d8	98		80 - 120				10/19/12 00:00	10/19/12 06:53	25.0
4-Bromofluorobenzene	97		75 - 110				10/19/12 00:00	10/19/12 06:53	25.0

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/30/12 15:09	10/30/12 15:13	1.00

**Method: SW 9056 - General Chemistry Parameters**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	11800		500		mg/L		10/23/12 09:59	10/23/12 09:59	500

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30762 - MW-10**

Date Collected: 10/16/12 14:32

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-02**

Matrix: Ground Water

**Sampler Phone Number: (815) 235-7643**

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	9.6		5.0	2.5	ug/L			10/23/12 20:00	2.5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Surr)	127	X	80 - 120					10/23/12 20:00	2.5

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<50.0		50.0		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
<b>1,1-Dichloroethane</b>	<b>12.3</b>		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
1,2-Dichloroethane	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
<b>1,1-Dichloroethene</b>	<b>26.7</b>		10.0		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
<b>cis-1,2-Dichloroethene</b>	<b>29.2</b>		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
trans-1,2-Dichloroethene	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
Methylene Chloride	<25.0		25.0		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
<b>Tetrachloroethene</b>	<b>352</b>		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
<b>1,1,1-Trichloroethane</b>	<b>192</b>		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
1,1,2-Trichloroethane	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
<b>Trichloroethene</b>	<b>27.4</b>		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
Vinyl chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
Xylenes, total	<15.0		15.0		ug/L		10/19/12 00:00	10/19/12 06:29	5.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	100		75 - 120				10/19/12 00:00	10/19/12 06:29	5.00
Toluene-d8	98		80 - 120				10/19/12 00:00	10/19/12 06:29	5.00
4-Bromofluorobenzene	97		75 - 110				10/19/12 00:00	10/19/12 06:29	5.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/19/12 13:50	10/19/12 13:57	1.00

**Method: SW 9056 - General Chemistry Parameters**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	29.6		2.00		mg/L		10/23/12 09:59	10/23/12 09:59	2.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

## Client Sample ID: 30764 - R14R

Date Collected: 10/16/12 15:22

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

Lab Sample ID: CVJ1252-03

Matrix: Ground Water

Sampler Phone Number: (815) 235-7643

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0		2.0	1.0	ug/L			10/23/12 14:30	1
<b>Surrogate</b>									
Dibromofluoromethane (Surr)	123	X		80 - 120			Prepared	Analyzed	Dil Fac
								10/23/12 14:30	1

### Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
1,1-Dichloroethane	3.27		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
1,1-Dichloroethene	6.36		2.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
Tetrachloroethene	3.23		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
1,1,1-Trichloroethane	25.1		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
Trichloroethene	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
Xylenes, total	<3.00		3.00		ug/L		10/18/12 00:00	10/18/12 23:45	1.00
<b>Surrogate</b>									
Dibromofluoromethane	103		75 - 120				Prepared	Analyzed	Dil Fac
Toluene-d8	98		80 - 120				10/18/12 00:00	10/18/12 23:45	1.00
4-Bromofluorobenzene	97		75 - 110				10/18/12 00:00	10/18/12 23:45	1.00
							10/18/12 00:00	10/18/12 23:45	1.00

### Method: SW 9041A - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

### Method: SW 9056 - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	42.4		5.00		mg/L		10/23/12 09:59	10/23/12 09:59	5.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30775 - MW34**

Date Collected: 10/16/12 16:43

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-04**

Matrix: Ground Water

Sampler Phone Number: (815) 235-7643

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L		10/23/12 14:59		1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Sur)	105		80 - 120				10/23/12 14:59		1

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
Tetrachloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
Trichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 00:09	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	105		75 - 120				10/19/12 00:00	10/19/12 00:09	1.00
Toluene-d8	97		80 - 120				10/19/12 00:00	10/19/12 00:09	1.00
4-Bromofluorobenzene	94		75 - 110				10/19/12 00:00	10/19/12 00:09	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30766 - MW12**

**Lab Sample ID: CVJ1252-05**

**Matrix: Ground Water**

Date Collected: 10/16/12 17:35  
Date Received: 10/17/12 16:10  
Sampler Name: Mike Day

**Sampler Phone Number: (815) 235-7643**

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L			10/23/12 15:29	1
<b>Surrogate</b>									
Dibromofluoromethane (Sur)	114			80 - 120			Prepared	Analyzed	Dil Fac

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
<b>Tetrachloroethene</b>	<b>4.61</b>		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
Trichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 00:33	1.00
<b>Surrogate</b>									
Dibromofluoromethane	105			75 - 120			Prepared	Analyzed	Dil Fac
Toluene-d8	97			80 - 120			10/19/12 00:00	10/19/12 00:33	1.00
4-Bromofluorobenzene	96			75 - 110			10/19/12 00:00	10/19/12 00:33	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30771 - MW-R30**

Date Collected: 10/16/12 18:07

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-06**

Matrix: Ground Water

**Sampler Phone Number: (815) 235-7643**

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
<b>cis-1,2-Dichloroethene</b>	<b>34.2</b>		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
<b>Tetrachloroethene</b>	<b>24.9</b>		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
<b>1,1,1-Trichloroethane</b>	<b>1.07</b>		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
<b>Trichloroethene</b>	<b>59.2</b>		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 00:57	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	103		75 - 120				10/19/12 00:00	10/19/12 00:57	1.00
Toluene-d8	98		80 - 120				10/19/12 00:00	10/19/12 00:57	1.00
4-Bromofluorobenzene	97		75 - 110				10/19/12 00:00	10/19/12 00:57	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30768 - MW-19**

**Lab Sample ID: CVJ1252-07**

**Matrix: Ground Water**

Date Collected: 10/16/12 18:39  
Date Received: 10/17/12 16:10  
Sampler Name: Mike Day

**Sampler Phone Number: (815) 235-7643**

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	120		40	20	ug/L			10/22/12 16:54	20
<b>Surrogate</b>									
Dibromofluoromethane (Sur)	116	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
1,1-Dichloroethane	67.8		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
1,1-Dichloroethene	17.3		2.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
cis-1,2-Dichloroethene	7.14		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
Tetrachloroethene	45.5		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
1,1,1-Trichloroethane	9.35		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
Trichloroethene	5.23		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 01:20	1.00
<b>Surrogate</b>									
Dibromofluoromethane	97	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8	96			75 - 120			10/19/12 00:00	10/19/12 01:20	1.00
4-Bromofluorobenzene	98			80 - 120			10/19/12 00:00	10/19/12 01:20	1.00
				75 - 110			10/19/12 00:00	10/19/12 01:20	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30776 - EB01**

Date Collected: 10/16/12 19:00

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-08**

Matrix: Water

Sampler Phone Number: (815) 235-7643

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L			10/23/12 15:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Surr)	108			80 - 120				10/23/12 15:59	1

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
Tetrachloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
Trichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 01:44	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	105			75 - 120			10/19/12 00:00	10/19/12 01:44	1.00
Toluene-d8	98			80 - 120			10/19/12 00:00	10/19/12 01:44	1.00
4-Bromofluorobenzene	98			75 - 110			10/19/12 00:00	10/19/12 01:44	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30770 - D01**

Date Collected: 10/17/12 08:45

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-09**

Matrix: Ground Water

Sampler Phone Number: (815) 235-7643

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L			10/23/12 16:29	1
<b>Surrogate</b>									
Dibromofluoromethane (Surr)	118		Limits				Prepared	Analyzed	Dil Fac
			80 - 120					10/23/12 16:29	1

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
Tetrachloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
Trichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 02:08	1.00
<b>Surrogate</b>									
Dibromofluoromethane	101		Limits				Prepared	Analyzed	Dil Fac
			75 - 120					10/19/12 00:00	1.00
Toluene-d8	97		80 - 120					10/19/12 00:00	1.00
4-Bromofluorobenzene	97		75 - 110					10/19/12 00:00	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30774 - MW-33**

Date Collected: 10/17/12 10:07

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-10**

Matrix: Ground Water

**Sampler Phone Number: (815) 235-7643**

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L			10/23/12 12:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Surr)	102			80 - 120				10/23/12 12:59	1

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
Tetrachloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
Trichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 02:32	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	103			75 - 120				10/19/12 00:00	10/19/12 02:32
Toluene-d8	96			80 - 120				10/19/12 00:00	10/19/12 02:32
4-Bromofluorobenzene	99			75 - 110				10/19/12 00:00	10/19/12 02:32

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

## Client Sample ID: 30773 - MW-32

Date Collected: 10/17/12 10:50

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

Lab Sample ID: CVJ1252-11

Matrix: Ground Water

Sampler Phone Number: (815) 235-7643

### Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
Tetrachloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
Trichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 02:55	1.00
<b>Surrogate</b>									
	%Recovery	Qualifier	<b>Limits</b>				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	106		75 - 120				10/19/12 00:00	10/19/12 02:55	1.00
Toluene-d8	98		80 - 120				10/19/12 00:00	10/19/12 02:55	1.00
4-Bromofluorobenzene	97		75 - 110				10/19/12 00:00	10/19/12 02:55	1.00

### Method: SW 9041A - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30772 - MW-31**

Date Collected: 10/17/12 11:15

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-12**

Matrix: Ground Water

**Sampler Phone Number: (815) 235-7643**

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
Tetrachloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
Trichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 03:19	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	106		75 - 120				10/19/12 00:00	10/19/12 03:19	1.00
Toluene-d8	97		80 - 120				10/19/12 00:00	10/19/12 03:19	1.00
4-Bromofluorobenzene	97		75 - 110				10/19/12 00:00	10/19/12 03:19	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30767 - MW-18**

**Lab Sample ID: CVJ1252-13**

**Matrix: Ground Water**

Date Collected: 10/17/12 11:52  
Date Received: 10/17/12 16:10  
Sampler Name: Mike Day

**Sampler Phone Number: (815) 235-7643**

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L			10/25/12 19:06	1
<b>Surrogate</b>									
Dibromofluoromethane (Sur)	112			80 - 120			Prepared	Analyzed	Dil Fac

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
1,1-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
1,1-Dichloroethene	<2.00		2.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
Tetrachloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
Trichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 03:43	1.00	
<b>Surrogate</b>										
Dibromofluoromethane	102			75 - 120			Prepared	Analyzed	Dil Fac	
Toluene-d8	101			80 - 120				10/19/12 00:00	10/19/12 03:43	1.00
4-Bromofluorobenzene	96			75 - 110				10/19/12 00:00	10/19/12 03:43	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30765 - MW-11**

Date Collected: 10/17/12 12:50

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-14**

Matrix: Ground Water

Sampler Phone Number: (815) 235-7643

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	9.8		2.0	1.0	ug/L			10/23/12 17:30	1
<b>Surrogate</b>									
Dibromofluoromethane (Surrogate)	116			80 - 120			Prepared	Analyzed	Dil Fac
								10/23/12 17:30	1

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
1,1-Dichloroethane	13.3		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
1,1-Dichloroethene	33.3		2.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
cis-1,2-Dichloroethene	28.5		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
Methylene Chloride	<5.00		5.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
Tetrachloroethene	477		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
1,1,1-Trichloroethane	244		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
Trichloroethene	24.7		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
Vinyl chloride	<1.00		1.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
Xylenes, total	<3.00		3.00		ug/L		10/19/12 00:00	10/19/12 04:06	1.00
<b>Surrogate</b>									
Dibromofluoromethane	96		75 - 120				Prepared	Analyzed	Dil Fac
Toluene-d8	95		80 - 120				10/19/12 00:00	10/19/12 04:06	1.00
4-Bromofluorobenzene	95		75 - 110				10/19/12 00:00	10/19/12 04:06	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		10/22/12 16:08	10/22/12 16:14	1.00

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

## Client Sample ID: 30777 - EB02

Date Collected: 10/17/12 13:11

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

Lab Sample ID: CVJ1252-15

Matrix: Water

Sampler Phone Number: (815) 235-7643

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L				
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	118		80 - 120						

### Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L				
1,1-Dichloroethane	<1.00		1.00		ug/L				
1,2-Dichloroethane	<1.00		1.00		ug/L				
1,1-Dichloroethene	<2.00		2.00		ug/L				
cis-1,2-Dichloroethene	<1.00		1.00		ug/L				
trans-1,2-Dichloroethene	<1.00		1.00		ug/L				
Methylene Chloride	<5.00		5.00		ug/L				
Tetrachloroethene	<1.00		1.00		ug/L				
1,1,1-Trichloroethane	<1.00		1.00		ug/L				
1,1,2-Trichloroethane	<1.00		1.00		ug/L				
Trichloroethene	<1.00		1.00		ug/L				
Vinyl chloride	<1.00		1.00		ug/L				
Xylenes, total	<3.00		3.00		ug/L				
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	104		75 - 120						
Toluene-d8	97		80 - 120						
4-Bromofluorobenzene	98		75 - 110						

### Method: SW 9041A - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units				

# Client Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30778 - TB01**

Date Collected: 10/17/12 14:58

Date Received: 10/17/12 16:10

Sampler Name: Mike Day

**Lab Sample ID: CVJ1252-16**

Matrix: Water

Sampler Phone Number: (815) 235-7643

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L	-		10/23/12 18:30	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Sur)	115			80 - 120				10/23/12 18:30	1

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
1,1-Dichloroethane	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
1,2-Dichloroethane	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
1,1-Dichloroethene	<2.00		2.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
cis-1,2-Dichloroethene	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
trans-1,2-Dichloroethene	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
Methylene Chloride	<5.00		5.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
Tetrachloroethene	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
1,1,1-Trichloroethane	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
1,1,2-Trichloroethane	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
Trichloroethene	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
Vinyl chloride	<1.00		1.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
Xylenes, total	<3.00		3.00	ug/L		10/19/12 00:00	10/19/12 04:54	1.00	
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	104			75 - 120			10/19/12 00:00	10/19/12 04:54	1.00
Toluene-d8	97			80 - 120			10/19/12 00:00	10/19/12 04:54	1.00
4-Bromofluorobenzene	97			75 - 110			10/19/12 00:00	10/19/12 04:54	1.00

**Method: SW 9041A - VOC Preservation Check**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units	-	10/22/12 16:08	10/22/12 16:14	1.00

## Surrogate Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS) Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	DBFM (80-120)	Percent Surrogate Recovery (Acceptance Limits)		
			105	110	115
CVJ1252-01	30763 - R13	125 X			
CVJ1252-02	30762 - MW-10	127 X			
CVJ1252-03	30764 - R14R	123 X			
CVJ1252-04	30775 - MW34	105			
CVJ1252-05	30766 - MW12	114			
CVJ1252-07	30768 - MW-19	116			
CVJ1252-09	30770 - D01	118			
CVJ1252-10	30774 - MW-33	102			
CVJ1252-13	30767 - MW-18	112			
CVJ1252-14	30765 - MW-11	116			

#### Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS) Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	DBFM (80-120)	Percent Surrogate Recovery (Acceptance Limits)		
			105	110	115
440-26864-A-5 MS	Matrix Spike	105			
440-26864-A-5 MSD	Matrix Spike Duplicate	107			
440-27189-9 MS	CVJ1252-10	105			
440-27189-9 MSD	CVJ1252-10	105			
440-27435-F-2 MS	Matrix Spike	104			
440-27435-F-2 MSD	Matrix Spike Duplicate	106			
CVJ1252-08	30776 - EB01	108			
CVJ1252-15	30777 - EB02	118			
CVJ1252-16	30778 - TB01	115			
LCS 440-60817/3	Lab Control Sample	101			
LCS 440-61097/3	Lab Control Sample	99			
LCS 440-61769/3	Lab Control Sample	101			
MB 440-60817/2	Method Blank	103			
MB 440-61097/2	Method Blank	101			
MB 440-61769/2	Method Blank	101			

#### Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

### Method: SW 8260B - Volatile Organic Compounds Matrix: Ground Water

Prep Type: Total

Lab Sample ID	Client Sample ID	DBFM (75-120)	Percent Surrogate Recovery (Acceptance Limits)		
			Toluene-d8 (80-120)	BFB (75-110)	
CVJ1252-01	30763 - R13	97	98	97	
CVJ1252-02	30762 - MW-10	100	98	97	
CVJ1252-03	30764 - R14R	103	98	97	
CVJ1252-04	30775 - MW34	105	97	94	
CVJ1252-05	30766 - MW12	105	97	96	
CVJ1252-06	30771 - MW-R30	103	98	97	

## Surrogate Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Method: SW 8260B - Volatile Organic Compounds (Continued)

Matrix: Ground Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVJ1252-07	30768 - MW-19	97	96	98
CVJ1252-09	30770 - D01	101	97	97
CVJ1252-10	30774 - MW-33	103	96	99
CVJ1252-11	30773 - MW-32	106	98	97
CVJ1252-12	30772 - MW-31	106	97	97
CVJ1252-13	30767 - MW-18	102	101	96
CVJ1252-14	30765 - MW-11	96	95	95

#### Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVJ1252-08	30776 - EB01	105	98	98
CVJ1252-15	30777 - EB02	104	97	98
CVJ1252-16	30778 - TB01	104	97	97

#### Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
12J1120-BLK1	Method Blank	101	97	97

#### Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

### Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (80-120)
12J1120-BS1	Lab Control Sample	103	100	99
12J1120-MS1	30774 - MW-33	99	98	101
12J1120-MSD1	30774 - MW-33	99	97	100

#### Surrogate Legend

## Surrogate Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

DBFM = Dibromofluoromethane  
Toluene-d8 = Toluene-d8  
BFB = 4-Bromofluorobenzene

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
 Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

#### Lab Sample ID: MB 440-60817/2

Matrix: Water

Analysis Batch: 60817

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L			10/22/12 10:46	1
<hr/>									
Surrogate									
Dibromofluoromethane (Sur)		%Recovery	Qualifer	Limits			Prepared	Analyzed	Dil Fac
		103		80 - 120				10/22/12 10:46	1

#### Lab Sample ID: LCS 440-60817/3

Matrix: Water

Analysis Batch: 60817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
1,4-Dioxane	10.0	9.93		ug/L		99	70 - 125
<hr/>							
Surrogate							
Dibromofluoromethane (Sur)		%Recovery	Qualifer	Limits			101
				80 - 120			101

#### Lab Sample ID: 440-26864-A-5 MS

Matrix: Water

Analysis Batch: 60817

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
1,4-Dioxane	<1.0		10.0	10.1		ug/L		101	70 - 130
<hr/>									
Surrogate									
Dibromofluoromethane (Sur)		%Recovery	Qualifer	Limits				105	80 - 120
				80 - 120				105	80 - 120

#### Lab Sample ID: 440-26864-A-5 MSD

Matrix: Water

Analysis Batch: 60817

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD Limit
1,4-Dioxane	<1.0		10.0	11.0		ug/L		110	70 - 130
<hr/>									
Surrogate									
Dibromofluoromethane (Sur)		%Recovery	Qualifer	Limits				107	80 - 120
				80 - 120				107	80 - 120

#### Lab Sample ID: MB 440-61097/2

Matrix: Water

Analysis Batch: 61097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L			10/23/12 10:59	1
<hr/>									
Surrogate									
Dibromofluoromethane (Sur)		%Recovery	Qualifer	Limits			Prepared	Analyzed	Dil Fac
				80 - 120				10/23/12 10:59	1

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-61097/3**

**Matrix: Water**

**Analysis Batch: 61097**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
1,4-Dioxane	10.0	9.51		ug/L		95	70 - 125
Surrogate	%Recovery	LCS Qualifier	Limits				
Dibromofluoromethane (Surr)	99		80 - 120				

**Lab Sample ID: 440-27189-9 MS**

**Matrix: Water**

**Analysis Batch: 61097**

**Client Sample ID: CVJ1252-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec
1,4-Dioxane	<1.0		10.0	9.28		ug/L		93
Surrogate	%Recovery	MS Qualifier	Limits					
Dibromofluoromethane (Surr)	105		80 - 120					

**Lab Sample ID: 440-27189-9 MSD**

**Matrix: Water**

**Analysis Batch: 61097**

**Client Sample ID: CVJ1252-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD	RPD Limit
1,4-Dioxane	<1.0		10.0	9.51		ug/L		95	70 - 130	2
Surrogate	%Recovery	MSD Qualifier	Limits							
Dibromofluoromethane (Surr)	105		80 - 120							

**Lab Sample ID: MB 440-61769/2**

**Matrix: Water**

**Analysis Batch: 61769**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<1.0		2.0	1.0	ug/L			10/25/12 18:05	1
Surrogate	%Recovery	MB Qualifier	Limits						
Dibromofluoromethane (Surr)	101		80 - 120				Prepared	Analyzed	Dil Fac
								10/25/12 18:05	1

**Lab Sample ID: LCS 440-61769/3**

**Matrix: Water**

**Analysis Batch: 61769**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
1,4-Dioxane	10.0	10.1		ug/L		101	70 - 125
Surrogate	%Recovery	LCS Qualifier	Limits				
Dibromofluoromethane (Surr)	101		80 - 120				

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS) (Continued)

#### Lab Sample ID: 440-27435-F-2 MS

Matrix: Water

Analysis Batch: 61769

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
1,4-Dioxane	<1.0		10.0	10.1		ug/L		101	70 - 130
<b>Surrogate</b>									
Dibromofluoromethane (Sur)	104				80 - 120				

#### Lab Sample ID: 440-27435-F-2 MSD

Matrix: Water

Analysis Batch: 61769

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.	%Rec.	
	Result	Qualifier	Added	Result	Qualifier					
1,4-Dioxane	<1.0		10.0	10.2		ug/L		102	70 - 130	0
<b>Surrogate</b>										30
Dibromofluoromethane (Sur)	106				80 - 120					

### Method: SW 8260B - Volatile Organic Compounds

#### Lab Sample ID: 12J1120-BLK1

Matrix: Water - NonPotable

Analysis Batch: 12J1120

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Acetone	<10.0		10.0		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
1,1-Dichloroethane	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
1,2-Dichloroethane	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
1,1-Dichloroethene	<2.00		2.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
Methylene Chloride	<5.00		5.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
Tetrachloroethene	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
1,1,1-Trichloroethane	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
1,1,2-Trichloroethane	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
Trichloroethene	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
Vinyl chloride	<1.00		1.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
Xylenes, total	<3.00		3.00		ug/L		10/18/12 00:00	10/18/12 21:47	1.00	
<b>Surrogate</b>										
Dibromofluoromethane	101		75 - 120				10/18/12 00:00	10/18/12 21:47	1.00	
Toluene-d8	97		80 - 120				10/18/12 00:00	10/18/12 21:47	1.00	
4-Bromofluorobenzene	97		75 - 110				10/18/12 00:00	10/18/12 21:47	1.00	

#### Lab Sample ID: 12J1120-BS1

Matrix: Water - NonPotable

Analysis Batch: 12J1120

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits
	Added	Result	Qualifier				
Acetone	20.0	26.5		ug/L		133	60 - 150
1,1-Dichloroethane	20.0	21.0		ug/L		105	60 - 130

#### Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 12J1120\_P

%Rec.

## QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Method: SW 8260B - Volatile Organic Compounds (Continued)

**Lab Sample ID: 12J1120-BS1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12J1120**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total**

**Prep Batch: 12J1120\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,2-Dichloroethane	20.0	21.5		ug/L		108	65 - 140	
1,1-Dichloroethene	20.0	18.5		ug/L		92	60 - 135	
cis-1,2-Dichloroethene	20.0	20.5		ug/L		102	70 - 135	
trans-1,2-Dichloroethene	20.0	19.8		ug/L		99	60 - 145	
Methylene Chloride	20.0	19.1		ug/L		96	55 - 145	
Tetrachloroethene	20.0	19.9		ug/L		100	70 - 135	
1,1,1-Trichloroethane	20.0	20.6		ug/L		103	60 - 125	
1,1,2-Trichloroethane	20.0	19.3		ug/L		96	75 - 125	
Trichloroethene	20.0	19.8		ug/L		99	70 - 130	
Vinyl chloride	20.0	16.7		ug/L		84	45 - 135	
Xylenes, total	60.0	61.0		ug/L		102	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
Dibromofluoromethane	103		75 - 120					
Toluene-d8	100		80 - 120					
4-Bromofluorobenzene	99		80 - 120					

**Lab Sample ID: 12J1120-MS1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12J1120**

**Client Sample ID: 30774 - MW-33**

**Prep Type: Total**

**Prep Batch: 12J1120\_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec.	Limits
Acetone	<10.0		20.0	19.3		ug/L		96	45 - 150	
1,1-Dichloroethane	<1.00		20.0	18.8		ug/L		94	50 - 130	
1,2-Dichloroethane	<1.00		20.0	19.0		ug/L		95	55 - 140	
1,1-Dichloroethene	<2.00		20.0	16.7		ug/L		83	35 - 135	
cis-1,2-Dichloroethene	<1.00		20.0	19.5		ug/L		98	45 - 135	
trans-1,2-Dichloroethene	<1.00		20.0	18.0		ug/L		90	45 - 145	
Methylene Chloride	<5.00		20.0	17.8		ug/L		89	45 - 145	
Tetrachloroethene	<1.00		20.0	18.9		ug/L		95	40 - 135	
1,1,1-Trichloroethane	<1.00		20.0	18.5		ug/L		92	40 - 125	
1,1,2-Trichloroethane	<1.00		20.0	19.4		ug/L		97	60 - 130	
Trichloroethene	<1.00		20.0	18.8		ug/L		94	50 - 130	
Vinyl chloride	<1.00		20.0	13.6		ug/L		68	30 - 135	
Xylenes, total	<3.00		60.0	56.3		ug/L		94	40 - 135	
Surrogate	Matrix Spike %Recovery	Matrix Spike Qualifier	Matrix Spike Limits							
Dibromofluoromethane	99		75 - 120							
Toluene-d8	98		80 - 120							
4-Bromofluorobenzene	101		80 - 120							

**Lab Sample ID: 12J1120-MSD1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12J1120**

**Client Sample ID: 30774 - MW-33**

**Prep Type: Total**

**Prep Batch: 12J1120\_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
Acetone	<10.0		20.0	20.4		ug/L		101	45 - 150	5	35
1,1-Dichloroethane	<1.00		20.0	18.8		ug/L		94	50 - 130	0.4	25
1,2-Dichloroethane	<1.00		20.0	19.8		ug/L		99	55 - 140	4	15

# QC Sample Results

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

## Method: SW 8260B - Volatile Organic Compounds (Continued)

**Lab Sample ID: 12J1120-MSD1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12J1120**

**Client Sample ID: 30774 - MW-33**

**Prep Type: Total**

**Prep Batch: 12J1120\_P**

Analyte	Sample	Sample	Spike	Matrix	Spike Dup	Matrix	Spike Dup	D	%Rec	Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier	Unit						
1,1-Dichloroethene	<2.00		20.0	16.0		ug/L		80	35 - 135	4	30	
cis-1,2-Dichloroethene	<1.00		20.0	18.4		ug/L		92	45 - 135	6	20	
trans-1,2-Dichloroethene	<1.00		20.0	17.5		ug/L		87	45 - 145	3	35	
Methylene Chloride	<5.00		20.0	16.6		ug/L		83	45 - 145	7	30	
Tetrachloroethene	<1.00		20.0	18.4		ug/L		98	40 - 135	6	20	
1,1,1-Trichloroethane	<1.00		20.0	19.7		ug/L		96	60 - 130	0.8	15	
1,1,2-Trichloroethane	<1.00		20.0	19.3		ug/L		95	50 - 130	1	20	
Trichloroethene	<1.00		20.0	19.0		ug/L		70	30 - 135	2	20	
Vinyl chloride	<1.00		20.0	13.9		ug/L		94	40 - 135	0.2	20	
Xylenes, total	<3.00		60.0	56.4		ug/L						
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
Dibromofluoromethane	99			75 - 120								
Toluene-d8	97			80 - 120								
4-Bromofluorobenzene	100			80 - 120								

## Method: SW 9056 - General Chemistry Parameters

**Lab Sample ID: 12J1279-BLK1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12J1279**

**Client Sample ID: Method Blank**

**Prep Type: Total**

**Prep Batch: 12J1279\_P**

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	<1.00		1.00		mg/L		10/23/12 09:59	10/23/12 09:59	1.00

**Lab Sample ID: 12J1279-BS1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12J1279**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total**

**Prep Batch: 12J1279\_P**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Sulfate	10.0	10.5		mg/L		105	90 - 110

**Lab Sample ID: 12J1279-MS1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12J1279**

**Client Sample ID: Matrix Spike**

**Prep Type: Total**

**Prep Batch: 12J1279\_P**

Analyte	Sample	Sample	Spike	Matrix	Matrix	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier			
Sulfate	45.1		25.0	68.4		mg/L	93	80 - 120

**Lab Sample ID: 12J1279-MSD1**

**Matrix: Water - NonPotable**

**Analysis Batch: 12J1279**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total**

**Prep Batch: 12J1279\_P**

Analyte	Sample	Sample	Spike	Matrix	Matrix	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier			
Sulfate	45.1		25.0	68.8		mg/L	95	80 - 120

## QC Association Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### GC/MS VOA

#### Analysis Batch: 60817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-26864-A-5 MS	Matrix Spike	Total/NA	Water	8260B SIM	
440-26864-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	
CVJ1252-07	30768 - MW-19	Total/NA	Ground Water	8260B SIM	
LCS 440-60817/3	Lab Control Sample	Total/NA	Water	8260B SIM	
MB 440-60817/2	Method Blank	Total/NA	Water	8260B SIM	

#### Analysis Batch: 61097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-27189-9 MS	CVJ1252-10	Total/NA	Water	8260B SIM	
440-27189-9 MSD	CVJ1252-10	Total/NA	Water	8260B SIM	
CVJ1252-01	30763 - R13	Total/NA	Ground Water	8260B SIM	
CVJ1252-02	30762 - MW-10	Total/NA	Ground Water	8260B SIM	
CVJ1252-03	30764 - R14R	Total/NA	Ground Water	8260B SIM	
CVJ1252-04	30775 - MW34	Total/NA	Ground Water	8260B SIM	
CVJ1252-05	30766 - MW12	Total/NA	Ground Water	8260B SIM	
CVJ1252-08	30776 - EB01	Total/NA	Water	8260B SIM	
CVJ1252-09	30770 - D01	Total/NA	Ground Water	8260B SIM	
CVJ1252-10	30774 - MW-33	Total/NA	Ground Water	8260B SIM	
CVJ1252-14	30765 - MW-11	Total/NA	Ground Water	8260B SIM	
CVJ1252-15	30777 - EB02	Total/NA	Water	8260B SIM	
CVJ1252-16	30778 - TB01	Total/NA	Water	8260B SIM	
LCS 440-61097/3	Lab Control Sample	Total/NA	Water	8260B SIM	
MB 440-61097/2	Method Blank	Total/NA	Water	8260B SIM	

#### Analysis Batch: 61769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-27435-F-2 MS	Matrix Spike	Total/NA	Water	8260B SIM	
440-27435-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	
CVJ1252-13	30767 - MW-18	Total/NA	Ground Water	8260B SIM	
LCS 440-61769/3	Lab Control Sample	Total/NA	Water	8260B SIM	
MB 440-61769/2	Method Blank	Total/NA	Water	8260B SIM	

### GCMS Volatiles

#### Analysis Batch: 12J1085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ1252-02	30762 - MW-10	Total	Ground Water	SW 9041A	12J1085_P

#### Analysis Batch: 12J1120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J1120-BLK1	Method Blank	Total	Water - NonPotable	SW 8260B	12J1120_P
12J1120-BS1	Lab Control Sample	Total	Water - NonPotable	SW 8260B	12J1120_P
12J1120-MS1	30774 - MW-33	Total	Water - NonPotable	SW 8260B	12J1120_P
12J1120-MSD1	30774 - MW-33	Total	Water - NonPotable	SW 8260B	12J1120_P
CVJ1252-01	30763 - R13	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-02	30762 - MW-10	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-03	30764 - R14R	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-04	30775 - MW34	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-05	30766 - MW12	Total	Ground Water	SW 8260B	12J1120_P

## QC Association Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### GCMS Volatiles (Continued)

#### Analysis Batch: 12J1120 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ1252-06	30771 - MW-R30	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-07	30768 - MW-19	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-08	30776 - EB01	Total	Water	SW 8260B	12J1120_P
CVJ1252-09	30770 - D01	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-10	30774 - MW-33	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-11	30773 - MW-32	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-12	30772 - MW-31	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-13	30767 - MW-18	Total	Ground Water	SW 8260B	12J1120_P
CVJ1252-14	30765 - MW-11	Total	Water	SW 8260B	12J1120_P
CVJ1252-15	30777 - EB02	Total	Water	SW 8260B	12J1120_P
CVJ1252-16	30778 - TB01	Total	Water	SW 8260B	12J1120_P

#### Analysis Batch: 12J1188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ1252-03	30764 - R14R	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-04	30775 - MW34	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-05	30766 - MW12	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-06	30771 - MW-R30	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-07	30768 - MW-19	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-08	30776 - EB01	Total	Water	SW 9041A	12J1188_P
CVJ1252-09	30770 - D01	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-10	30774 - MW-33	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-11	30773 - MW-32	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-12	30772 - MW-31	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-13	30767 - MW-18	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-14	30765 - MW-11	Total	Ground Water	SW 9041A	12J1188_P
CVJ1252-15	30777 - EB02	Total	Water	SW 9041A	12J1188_P
CVJ1252-16	30778 - TB01	Total	Water	SW 9041A	12J1188_P

#### Analysis Batch: 12J1636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ1252-01	30763 - R13	Total	Ground Water	SW 9041A	12J1636_P

#### Prep Batch: 12J1085\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ1252-02	30762 - MW-10	Total	Ground Water	Default Prep VOC	

#### Prep Batch: 12J1120\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J1120-BLK1	Method Blank	Total	Water - NonPotable	SW 5030B	
12J1120-BS1	Lab Control Sample	Total	Water - NonPotable	SW 5030B	
12J1120-MS1	30774 - MW-33	Total	Water - NonPotable	SW 5030B	
12J1120-MSD1	30774 - MW-33	Total	Water - NonPotable	SW 5030B	
CVJ1252-01	30763 - R13	Total	Ground Water	SW 5030B	
CVJ1252-02	30762 - MW-10	Total	Ground Water	SW 5030B	
CVJ1252-03	30764 - R14R	Total	Ground Water	SW 5030B	
CVJ1252-04	30775 - MW34	Total	Ground Water	SW 5030B	
CVJ1252-05	30766 - MW12	Total	Ground Water	SW 5030B	

## QC Association Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### GCMS Volatiles (Continued)

#### Prep Batch: 12J1120\_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ1252-06	30771 - MW-R30	Total	Ground Water	SW 5030B	
CVJ1252-07	30768 - MW-19	Total	Ground Water	SW 5030B	
CVJ1252-08	30776 - EB01	Total	Water	SW 5030B	
CVJ1252-09	30770 - D01	Total	Ground Water	SW 5030B	
CVJ1252-10	30774 - MW-33	Total	Ground Water	SW 5030B	
CVJ1252-11	30773 - MW-32	Total	Ground Water	SW 5030B	
CVJ1252-12	30772 - MW-31	Total	Ground Water	SW 5030B	
CVJ1252-13	30767 - MW-18	Total	Ground Water	SW 5030B	
CVJ1252-14	30765 - MW-11	Total	Ground Water	SW 5030B	
CVJ1252-15	30777 - EB02	Total	Water	SW 5030B	
CVJ1252-16	30778 - TB01	Total	Water	SW 5030B	

#### Prep Batch: 12J1188\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ1252-03	30764 - R14R	Total	Ground Water	Default Prep	
CVJ1252-04	30775 - MW34	Total	Ground Water	VOC	
CVJ1252-05	30766 - MW12	Total	Ground Water	Default Prep	
CVJ1252-06	30771 - MW-R30	Total	Ground Water	VOC	
CVJ1252-07	30768 - MW-19	Total	Ground Water	Default Prep	
CVJ1252-08	30776 - EB01	Total	Water	VOC	
CVJ1252-09	30770 - D01	Total	Ground Water	Default Prep	
CVJ1252-10	30774 - MW-33	Total	Ground Water	VOC	
CVJ1252-11	30773 - MW-32	Total	Ground Water	Default Prep	
CVJ1252-12	30772 - MW-31	Total	Ground Water	VOC	
CVJ1252-13	30767 - MW-18	Total	Ground Water	Default Prep	
CVJ1252-14	30765 - MW-11	Total	Ground Water	VOC	
CVJ1252-15	30777 - EB02	Total	Water	Default Prep	
CVJ1252-16	30778 - TB01	Total	Water	VOC	

#### Prep Batch: 12J1636\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ1252-01	30763 - R13	Total	Ground Water	Default Prep VOC	

### WetChem

#### Analysis Batch: 12J1279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J1279-BLK1	Method Blank	Total	Water - NonPotable	SW 9056	12J1279_P
12J1279-BS1	Lab Control Sample	Total	Water - NonPotable	SW 9056	12J1279_P

## QC Association Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### **WetChem (Continued)**

#### **Analysis Batch: 12J1279 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J1279-MS1	Matrix Spike	Total	Water - NonPotable	SW 9056	12J1279_P
12J1279-MSD1	Matrix Spike Duplicate	Total	Water - NonPotable	SW 9056	12J1279_P
CVJ1252-01	30763 - R13	Total	Ground Water	SW 9056	12J1279_P
CVJ1252-02	30762 - MW-10	Total	Ground Water	SW 9056	12J1279_P
CVJ1252-03	30764 - R14R	Total	Ground Water	SW 9056	12J1279_P

#### **Prep Batch: 12J1279\_P**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J1279-BLK1	Method Blank	Total	Water - NonPotable	NO PREP - WET	9
12J1279-BS1	Lab Control Sample	Total	Water - NonPotable	NO PREP - WET	10
12J1279-MS1	Matrix Spike	Total	Water - NonPotable	NO PREP - WET	11
12J1279-MSD1	Matrix Spike Duplicate	Total	Water - NonPotable	NO PREP - WET	12
CVJ1252-01	30763 - R13	Total	Ground Water	NO PREP - WET	13
CVJ1252-02	30762 - MW-10	Total	Ground Water	NO PREP - WET	14
CVJ1252-03	30764 - R14R	Total	Ground Water	NO PREP - WET	15

## Lab Chronicle

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Client Sample ID: 30763 - R13

Date Collected: 10/16/12 13:55  
Date Received: 10/17/12 16:10

Lab Sample ID: CVJ1252-01  
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		25	61097	10/23/12 19:30	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		25.0	12J1120	10/19/12 06:53	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1636_P	10/30/12 15:09	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1636	10/30/12 15:13	FMK	TAL CF
Total	Analysis	SW 9056		500	12J1279	10/23/12 09:59	TLR	TAL CF
Total	Prep	NO PREP - WET CHEM		1.00	12J1279_P	10/23/12 09:59	RAK	TAL CF

### Client Sample ID: 30762 - MW-10

Date Collected: 10/16/12 14:32  
Date Received: 10/17/12 16:10

Lab Sample ID: CVJ1252-02  
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		2.5	61097	10/23/12 20:00	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		5.00	12J1120	10/19/12 06:29	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1085_P	10/19/12 13:50	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1085	10/19/12 13:57	FMK	TAL CF
Total	Analysis	SW 9056		2.00	12J1279	10/23/12 09:59	TLR	TAL CF
Total	Prep	NO PREP - WET CHEM		1.00	12J1279_P	10/23/12 09:59	RAK	TAL CF

### Client Sample ID: 30764 - R14R

Date Collected: 10/16/12 15:22  
Date Received: 10/17/12 16:10

Lab Sample ID: CVJ1252-03  
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 14:30	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/18/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/18/12 23:45	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF
Total	Analysis	SW 9056		5.00	12J1279	10/23/12 09:59	TLR	TAL CF
Total	Prep	NO PREP - WET CHEM		1.00	12J1279_P	10/23/12 09:59	RAK	TAL CF

### Client Sample ID: 30775 - MW34

Date Collected: 10/16/12 16:43  
Date Received: 10/17/12 16:10

Lab Sample ID: CVJ1252-04  
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 14:59	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 00:09	SJN	TAL CF

## Lab Chronicle

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30775 - MW34**

Date Collected: 10/16/12 16:43

Date Received: 10/17/12 16:10

**Lab Sample ID: CVJ1252-04**

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

**Client Sample ID: 30766 - MW12**

Date Collected: 10/16/12 17:35

Date Received: 10/17/12 16:10

**Lab Sample ID: CVJ1252-05**

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 15:29	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 00:33	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

**Client Sample ID: 30771 - MW-R30**

Date Collected: 10/16/12 18:07

Date Received: 10/17/12 16:10

**Lab Sample ID: CVJ1252-06**

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 00:57	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

**Client Sample ID: 30768 - MW-19**

Date Collected: 10/16/12 18:39

Date Received: 10/17/12 16:10

**Lab Sample ID: CVJ1252-07**

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		20	60817	10/22/12 16:54	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 01:20	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

**Client Sample ID: 30776 - EB01**

Date Collected: 10/16/12 19:00

Date Received: 10/17/12 16:10

**Lab Sample ID: CVJ1252-08**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 15:59	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 01:44	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF

TestAmerica Cedar Falls  
10/31/2012

## Lab Chronicle

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Client Sample ID: 30776 - EB01

Date Collected: 10/16/12 19:00  
Date Received: 10/17/12 16:10

### Lab Sample ID: CVJ1252-08

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

### Client Sample ID: 30770 - D01

Date Collected: 10/17/12 08:45  
Date Received: 10/17/12 16:10

### Lab Sample ID: CVJ1252-09

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 16:29	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 02:08	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

### Client Sample ID: 30774 - MW-33

Date Collected: 10/17/12 10:07  
Date Received: 10/17/12 16:10

### Lab Sample ID: CVJ1252-10

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 12:59	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 02:32	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

### Client Sample ID: 30773 - MW-32

Date Collected: 10/17/12 10:50  
Date Received: 10/17/12 16:10

### Lab Sample ID: CVJ1252-11

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 02:55	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

### Client Sample ID: 30772 - MW-31

Date Collected: 10/17/12 11:15  
Date Received: 10/17/12 16:10

### Lab Sample ID: CVJ1252-12

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 03:19	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

## Lab Chronicle

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

**Client Sample ID: 30767 - MW-18**

Date Collected: 10/17/12 11:52

Date Received: 10/17/12 16:10

**Lab Sample ID: CVJ1252-13**

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61769	10/25/12 19:06	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 03:43	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

**Client Sample ID: 30765 - MW-11**

Date Collected: 10/17/12 12:50

Date Received: 10/17/12 16:10

**Lab Sample ID: CVJ1252-14**

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 17:30	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 04:06	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

**Client Sample ID: 30777 - EB02**

Date Collected: 10/17/12 13:11

Date Received: 10/17/12 16:10

**Lab Sample ID: CVJ1252-15**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 18:01	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 04:30	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

**Lab Sample ID: CVJ1252-16**

Matrix: Water

**Client Sample ID: 30778 - TB01**

Date Collected: 10/17/12 14:58

Date Received: 10/17/12 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	61097	10/23/12 18:30	GK	TAL IRV
Total	Prep	SW 5030B		1.00	12J1120_P	10/19/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00	12J1120	10/19/12 04:54	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	12J1188_P	10/22/12 16:08	FMK	TAL CF
Total	Analysis	SW 9041A		1.00	12J1188	10/22/12 16:14	FMK	TAL CF

**Laboratory References:**

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

## Definitions/Glossary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⊗	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Certification Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT

TestAmerica Job ID: CVJ1252

Project/Site: 12-233

### Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA - LAP	IHLAP		101044	11-01-14
Illinois	NELAC	5	200024	11-29-12
Iowa	State Program	7	7	12-01-13
Kansas	NELAC	7	E-10341	01-31-13
Minnesota	NELAC	5	019-999-319	12-31-12
North Dakota	State Program	8	R-186	09-29-13
Oregon	NELAC	10	IA100001	09-29-13
Wisconsin	State Program	5	999917270	08-31-13

### Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0671	10-13-13
California	LA Cty Sanitation Districts	9	10256	01-31-13
California	NELAC	9	1108CA	01-31-13
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-13
Hawaii	State Program	9	N/A	01-31-13
Nevada	State Program	9	CA015312007A	07-31-13
New Mexico	State Program	6	N/A	01-31-13
Northern Mariana Islands	State Program	9	MP0002	01-31-13
Oregon	NELAC	10	4005	09-12-13
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-13

## Method Summary

Client: FEHR-GRAHAM & ASSOCIATES - FREEPORT  
Project/Site: 12-233

TestAmerica Job ID: CVJ1252

Method	Method Description	Protocol	Laboratory
8260B SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
SW 8260B	Volatile Organic Compounds		TAL CF
SW 9041A	VOC Preservation Check		TAL CF
SW 9056	General Chemistry Parameters		TAL CF

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



THE LEADER IN ENVIRONMENTAL TESTING

**Sauer Danfoss – Ames Iowa  
TA Work Order #CVJ1252**

**Case Narrative**

TestAmerica – Cedar Falls received one sample on October 17, 2012. The cooler was within laboratory temperature requirements. Requested analysis was SW-8260 volatile organic analysis, SW-8260 SIM 1,4-Dioxane, and Sulfate by SW-9056.

Sample ID		Date	
Field	Lab ID	Collected	Received
R13	CVJ1252-01	10/16/12 1355	10/17/12 1610
MW-10	CVJ1252-02	10/16/12 1432	10/17/12 1610
R14R	CVJ1252-03	10/16/12 1522	10/17/12 1610
MW34	CVJ1252-04	10/16/12 1643	10/17/12 1610
MW-12	CVJ1252-05	10/16/12 1735	10/17/12 1610
MW-R30	CVJ1252-06	10/16/12 1807	10/17/12 1610
MW-19	CVJ1252-07	10/16/12 1839	10/17/12 1610
EB01	CVJ1252-08	10/16/12 1900	10/17/12 1610
D01	CVJ1252-09	10/17/12 0845	10/17/12 1610
MW-33	CVJ1252-10	10/17/12 1007	10/17/12 1610
MW-32	CVJ1252-11	10/17/12 1050	10/17/12 1610
MW-31	CVJ1252-12	10/17/12 1115	10/17/12 1610
MW-18	CVJ1252-13	10/17/12 1152	10/17/12 1610
MW-11	CVJ1252-14	10/17/12 1250	10/17/12 1610
EB02	CVJ1252-15	10/17/12 1311	10/17/12 1610
TB01	CVJ1252-16	10/17/12 1458	10/17/12 1610

**8260 Volatiles (Batch #1J1120)**

Method Blank – No detections of target compounds.

Laboratory Control Sample (LCS) – No deviations

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) – No deviations

Sample surrogates – No deviations

Sample Dilutions – The following samples were diluted due to target analyte concentration.

- No other issues were noted during analysis.

#### **9056 Sulfate (Batch#12J1279)**

Method Blank – No deviations

Laboratory Control Sample (LCS) – No deviations

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) – No deviations

Sample Dilutions – The following samples were diluted for target compound concentration: CVF0850-01, -02, and -03.

#### **8260 1,4-Dioxane (Batch#60817, 61097, 61769)**

Method Blank – No deviations

Laboratory Control Sample (LCS) – No deviations

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) – No deviations

Sample surrogates – The surrogate recovery for CVJ1252-01, -02, -03 were above laboratory control criteria.

Sample Dilutions – CVJ1252-01 was diluted because of non-target detections.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Cedar Falls Division  
704 Enterprise Drive  
Cedar Falls, IA 50613

Phone 319-277-2401 or 800-750-2401  
Fax 319-277-2425

To assist us in using the proper analytical methods,  
is this work being conducted for regulatory purposes?  
Compliance Monitoring \_\_\_\_\_

Client Name: Fehr Graham Client #: \_\_\_\_\_

Address: 221 E. Main St.

City/State/Zip Code: Freeport, IL 61032

Project Manager: Joel Zirkle

Email Address: EJarrett@fehr-graham.com

Telephone Number: 815-394-4700 Fax: 815-394-4702

Sampler Name: (Print Name) Mike Day

Sampler Signature: Mike Day

Project Name: Sauer Danfoss / Ames

Project #: 12-233

Site/Location ID: Sauer Danfoss - Ames State: IA

Report To: Erin Jarrett

Invoice To: Fehr Graham

Quote #: \_\_\_\_\_ PO#: \_\_\_\_\_

TAT <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (surcharges may apply)	Date Needed:	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix	Preservation & # of Containers				Analyze For:										QC Deliverables None Level 2 (Batch QC) Level 3 Level 4 Other: _____			
							SL - Sludge	DW - Drinking Water	GW - Groundwater	S - Soil/Solid	WW - Wastewater	Specify, Other	HNO <sub>3</sub>	ICN	NaOH	H <sub>2</sub> SO <sub>4</sub>	Methanol	None	Other (Specify)	1/4 Attacked - Table 1	1/4 Attacked - Table 1	2/4C Sulfate Method	Sulfate	
30763 - R13	10-16-12	13:55	G	GW	6								X	X	X									
30762 - MW-10	10-16-12	14:32	G	GW	6								X	X	X									
30764 - R14R	10-16-12	15:22	G	GW	6								X	X	X									
30775 - MW34	10-16-12	16:43	G	GW	6								X	X										
30766 - MW-12	10-16-12	17:35	G	GW	6								X	X										
30771 - MW-R30	10-16-12	18:07	G	GW	3								X											
30768 - MW-19	10-16-12	18:39	G	GW	6								X	X										
30776 - EB01	10-16-12	19:00	G	DI	6								X	X										

Special Instructions:

LABORATORY COMMENTS:

Relinquished By: <u>Mike Day</u>	Date: <u>10/17/12</u>	Time: <u>16:10</u>	Received By: <u>Mike Day</u>	Date: <u>10/17/12</u>	Time: <u>16:10</u>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAL-0033 (0708)

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Cedar Falls Division  
704 Enterprise Drive  
Cedar Falls, IA 50613

Phone 319-277-2401 or 800-750-2401  
Fax 319-277-2425

Client Name: Fehr Graham Client #: \_\_\_\_\_

Address: 221 E. Main St.

City/State/Zip Code: Freeport, IL 61032

Project Manager: Joel Zirkle

Email Address: E.Jarrett@fehr-graham.com

Telephone Number: 815-394-4700 Fax: 815-394-4702

Sampler Name: (Print Name) Mike Day

Sampler Signature: Mike Day

To assist us in using the proper analytical methods,  
is this work being conducted for regulatory purposes?  
Compliance Monitoring \_\_\_\_\_

Project Name: Suner Danfoss / Ames

Project #: 12-233

Site/Location ID: Suner Danfoss - Ames State: IA

Report To: Erin Jarrett

Invoice To: Fehr Graham

Quote #: \_\_\_\_\_ PO#: \_\_\_\_\_

TAT <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (surcharges may apply)	Date Needed:	Date Sampled	Time Sampled	G = Grab, C = Composite <input type="checkbox"/> Field Filtered	Matrix	Preservation & # of Containers	Analyze For:										QC Deliverables <input type="checkbox"/> None <input type="checkbox"/> Level 2 (Batch QC) <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Other: _____	
							SL - Sludge	DW - Drinking Water	GW - Groundwater	S - Soil/Solid	WW - Wastewater	Other	HNO <sub>3</sub>	HCl	NaOH	H <sub>2</sub> SO <sub>4</sub>	Methanol	
30770 - D01	10-17-12	8:45	G	GW	6		X	X										
30774 - MW-33	10-17-12	10:07	G	GW	18				X	X								
30773 - MW-32	10-17-12	10:50	G	GW	3				X									
30772 - MW-31	10-17-12	11:15	G	GW	3				X									
30767 - MW-18	10-17-12	11:52	G	GW	6				X	X								
30765 - MW-11	10-17-12	12:50	G	GW	6				X	X								
30777 - EB02	10-17-12	13:11	G	DI	6				X	X								
30778 - TB01	10-17-12	14:58	G	DI	6				X	X								

Special Instructions: \*MS/MSD vials taken at MW-33

MW#0 was dry - not sampled

Relinquished By: <u>Mike Day</u>	Date: <u>10/17/12</u>	Time: <u>16:10</u>	Received By: <u>J. A. L.</u>	Date: <u>10/17/12</u>	Time: <u>16:10</u>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

## LABORATORY COMMENTS:

TAL-0033 (0708)

Page 2 of 2

TABLE 1  
ANALYTE LIST

---

Acetone*
1,1-Dichloroethane*
1,2-Dichloroethane
1,1-Dichloroethene*
cis-1,2-Dichloroethene*
trans-1,2-Dichloroethene
1,4 Dioxane**
Methylene Chloride
Tetrachloroethene*
1,1,1-Trichloroethane*
1,1,2-Trichloroethane
Trichloroethene*
Vinyl Chloride***
Total Xylenes*

---

- \* Required by Sauer-Danfoss's Permit No. 6593-3.
- \*\* Required for select monitoring wells.
- \*\*\* Beginning second quarter 2002, as requested in the United States Environmental Protection Agency (US EPA) comments on the 2002 Annual Site Sampling Report.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613  
800-750-2401 • 319-277-2425 FAX

## Sample Receipt and Temperature Log Form

Client: Fehr Graham

Project: Sue, Dan Foss - Ames

City: Freeport, IL

Date: 12/17/12 Receiver's Initials: JL Time (Delivered): 4:10

### Temperature Record:

<b>Cooler ID# (If Applicable)</b>
<u>A-7</u>
<u>5.9 °C / On Ice</u>

Temp Blank

Temperature out of compliance

### Thermometer:

- IR - 111531565 'D'
- IR - 111531506 'E'
- IR - 61854108 'Front'
- 101681126

### Courier:

- UPS
- TA Courier
- FedEx
- TA Field Services
- FedEx Ground
- Client
- US Postal Service
- Other
- Spee-Dee

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

- Sample(s) not received in a cooler.
- Samples(s) received same day of sampling.
- Evidence of a chilling process
- No Temp. Blank. Inside temperature of cooler recorded.
- Temperature not taken:  

---

\*Refer to SOP CF-SS-01 for Temperature Criteria